IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Oxman et al.	Art Unit:	2162
Serial No.:	10/729,517	Examiner:	Giovanna B. Colan
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Title:	PRODUCING DOMESTIC RELATIONS ORDERS		

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Commissioner for Patents
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APPEAL BRIEF

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(i) REAL PARTY IN INTEREST

The real party in interest is FMR CORP., a corporation organized under the laws of Delaware.

(ii) RELATED APPEALS AND INTERFERENCES

The appellant is not aware of any prior or pending appeals, judicial proceedings, or interferences related to the above-identified patent application.

(iii) STATUS OF CLAIMS

Claims 1-3, 3-24, and 26-31 stand rejected in the application. Claim 4 and 25 stand withdrawn.

Claims 1-3, 3-24, 26, and 28-31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Broadbent et al. U.S. Patent Application Publication 2001/0047326, in view of Fay et al. U.S. Patent Application Publication 2002/0188540, and further in view of Esposito U.S. Patent Application Publication 2001/0051906. Claim 27 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Broadbent et al. U.S. Patent Application Publication 2001/0047326, in view of Fay et al. U.S. Patent Application Publication 2002/0188540, and in view of Esposito U.S. Patent Application Publication 2001/0051906, and further in view of Cohen et al. U.S. Patent Application Publication 2004/0064404.

Claims 1-3, 3-24, 26, and 28-31 are the appealed claims.

(iv) STATUS OF AMENDMENTS

None

(v) SUMMARY OF CLAIMED SUBJECT MATTER

A. Claim 1

Claim 1 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 1 describes a computerized system for producing a domestic relations order. [See e.g. Appellant's FIG. 2; specification pg. 7, ¶ [0040] lines 1-3; FIG. 3, pg. 9, ¶ [0044] lines 1-2]. Another feature of claim 1 describes a receiver for receiving information, alternate payee and court information, relating to a domestic relations order. [See e.g. Appellant's specification pg. 3, ¶ [0009] lines 1-3 and 5-7]. Another feature of claim 1 describes a rules engine in communication with the receiver for selecting sample text passages. [See e.g. Appellant's FIG. 3; specification pg. 3, ¶ [0009] lines 3-4, ¶ [0010] lines 4-5, pg. 9, ¶ [0046] line 3, pg. 10, ¶ [0047], lines 1-14]. Another feature of claim 1 describes a document assembler for automatically incorporating a first subset of the sample text passages and a second subset of the received information comprising the alternate payee and the court information into a court-compliant domestic relations order for submission to a court. [See e.g . Appellant's FIG 3; specification, pg. 9, Para. [0046] line 2, pg. 10-11, ¶ [0048] lines 1-10, pg. 12, ¶ [0050], lines 14-15].

C. Claim 3

Claim 3 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 3 describes information associated with a legal representative of the participant. [See e.g. Appellant's FIG. 14; specification pg. 3, ¶ [0009] lines 5-7, pg. 4, ¶ [0012] lines 3-4, pg. 14, ¶ [0058] lines 1-2]

B. Claim 5

Claim 5 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 5 describes information associated with a legal representative of the alternate payee. [See e.g. Appellant's FIG. 14; specification pg. 3, ¶ [0009] lines 5-7, pg. 4, ¶ [0012] lines 3-4, pg. 14, ¶ [0058] lines 1-2]

C. Claim 6

Claim 6 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 6 describes a data storage device for storing rules relating to a domestic relations order. [See e.g. Appellant's FIG. 3; specification pg. 11, ¶ [0049] lines 4-6]

D. Claim 8

Claim 8 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 8 describes sample text passages related to a domestic relations order. [See e.g. Appellant's FIG. 3; specification pg. 3, ¶ [0010] lines 2-4, ¶ [0011] lines 2-4, pg. 11, ¶ [0048] lines 3-4].

E. Claim 9

Claim 9 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 9 describes a rules engine which selects the first subset of sample text passages based, in least in part, on the stored rules. [See e.g. Appellant's FIG. 3; specification pg. 3, ¶ [0010] lines 4-5, pg. 9, ¶ [0046] lines 3]. [can't find based on stored rules explicitly]

F. Claim 10

Claim 10 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 10 describes a rules engine which selects the first subset of sample text passages based, in least in part, on the received information. [See e.g. Appellant's FIG. 3; specification pg. 2, ¶ [0010] lines 4-5, pg. 9, ¶ [0046] lines 3, ¶ [0011] lines 2-4].

G. Claim 11

Claim 11 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 11 describes the document assembler receiving additional information previously included in a domestic relations

order from the data storage device. [See e.g. Appellant's FIG. 18; specification pg. 3, ¶ [0010] lines 4-5, pg. 4, ¶ [0012] lines 1-2, pg. 12, ¶ [0050] lines 13-14, pg. 15, ¶ [0062] lines 9-12].

H. Claim 13

Claim 13 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 13 describes a method for producing a domestic relations order. [See e.g. Appellant's FIG. 1; specification pg. 5, ¶ [0035] through ¶ [0039], pgs. 6-7]. Another feature of claim 13 describes a method for providing a plurality of sample text passages relating to domestic relations orders, the sample text passages including embedded parameters comprising an alternate payee and court information. [See e.g. Appellant's FIG. 3; specification pg. 3, ¶ [0010] lines 2-4, ¶ [0011] lines 2-4, pg. 11, ¶ [0048] lines 3-4]. Another feature of claim 13 includes requesting and receiving information for inclusion into a domestic relations order where the requested information including values for one or more of the embedded parameters. [See e.g. Appellant's FIG. 3; specification pg. 3, ¶ [0009] lines 2-3, ¶ [0011] lines 4-5 and 9-11, pg. 4, ¶ [0012] line 1, ¶ [0014] line 4, pg. 9, ¶ [0045] lines 9-11, ¶ [0046] lines 4-6]. Another feature of claim 13 includes automatically assembling a court-compliant domestic relations order for submission to a court using a first subset of the sample text passages and a second subset of the requested information. [See e.g. Appellant's FIG. 3 and FIG. 5; specification pg. 2, ¶ [0005], lines 8-9, pg. 3, ¶ [0010] lines 2-5, ¶ [0011], lines 2-3, ¶ [0013] line 3, ¶ [0014], pg. 11, ¶ [0048], line 3, pg. 12, ¶ [0050] lines 14-15, ¶ [0051] lines 14-15].

I. Claim 17

Claim 17 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 17 describes receiving a subset of the requested information form a preciously completed domestic relations order. [See

e.g., Appellant's FIG. 18; specification pg. 3, ¶ [0010] lines 4-5, pg. 4, ¶ [0012] lines 1-2, pg. 12, ¶ [0050] lines 13-14, pg. 15, ¶ [0062] lines 9-12].

J. Claim 20

Claim 20 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 20 describes receiving a subset of the requested information associated with a legal representative of a participant in an employee benefit plan. [See e.g., Appellant's FIG. 14; specification pg. 3, ¶ [0009] lines 5-7, pg. 4, ¶ [0012] lines 3-4, pg. 14, ¶ [0058] lines 1-2].

K. Claim 22

Claim 22 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 22 describes receiving a subset of the requested information associated with a legal representative of a participant in an employee benefit plan. [See e.g., Appellant's FIG. 14; specification pg. 3, ¶ [0009] lines 5-7, pg. 4, ¶ [0012] lines 3-4, pg. 14, ¶ [0058] lines 1-2].

L. Claim 23

Claim 23 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 23 describes a set of rules related to generating a domestic relations order [See e.g., Appellant's FIG. 3; specification pg. 3, ¶ [0010] lines 1-2, pg. 9, ¶ [0046] line 3].

M. Claim 24

Claim 24 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 24 describes automatically assembling a court-compliant domestic relations order as comprising the subset of the sample text passages based, at least in part, on the rules. [See e.g., Appellant's FIG. 3; specification pg. 3, ¶ [0010] lines 2-4, ¶ [0011] lines 2-4, pg. 11, ¶ [0048] lines 3-4].

N. Claim 26

Claim 26 is described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 26 describes a computerized system for producing a domestic relations order. [See e.g., Appellant's FIG. 2; specification pg. 7, ¶ [0040] lines 1-3; FIG. 3, pg. 9, ¶ [0044] lines 1-2]. Another feature of claim 26 is means for storing sample text passages for inclusion into a domestic relations order, the sample text passages including embedded parameters comprising an alternate payee and court information. [See e.g., Appellant's FIG. 3, 355, 360 and 370]. Another feature of claim 26 is means for receiving information about a first domestic relations order, the information providing values for one or more of the embedded parameters; [See e.g., Appellant's FIG. 3, 310, pg. 9, ¶ [0045] lines 7-9]. Another feature of claim 26 is means for automatically assembling a court-compliant domestic relations order for submission to a court using a first subset of the stored sample text passages and at least a second subset of the received information. [See e.g., Appellant's FIG. 3, 330, pg. 9, ¶ [0046] lines 1-4]

O. Claim 31

Claim 31 described at least in the specification and figures at the cited locations which describe exemplary aspects of the claim. Claim 31 describes the court-compliant DRO is assembled according to one or more predefined document formats. [See e.g., Appellant's specification pg. 11, ¶ [0048] lines 3-4].

(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 1-3, 5-24, 26 and 28-31 are unpatentable under 35 U.S.C. §103(a) over Broadbent et al U.S. Patent Application Publication 2001/0047326, in view of Fay et al. U.S. Patent Application Publication 2002/0188540, and further in view of Esposito U.S. Patent Application Publication 2001/0051906. The claims do not stand or fall together.

a. Group I includes claims 1, 2, 7, 12-16, 18, 19, 21, 26, 28, 29.

b. Group II includes claims 3, 5, 20, 22.

c. Group III includes claims 6, 8, 9, 10, 11, 17, 23, 24 and 31.

B. Whether claim 27 stands rejected under 35 § U.S.C. §103(a) as being unpatentable over Broadbent et al U.S. Patent Application Publication 2001/0047326, in view of Fay et al. U.S. Patent Application Publication 2002/0188540, and in view of Esposito U.S. Patent Application Publication 2001/0051906, and further in view of Cohen et al. U.S. Patent Application Publication 2004/0064404.

a. Group I includes claim 27.

(vii) ARGUMENT

(i) Rejection under 35 U.S.C. § 103(a) over Broadbent et al. US Patent App. Pub. 2001/0047326 A1, in view of Fay et al. US Patent App. Pub. 2002/0188540 A1, and further in view of Esposito US Patent App. Pub. 2001/0051906

a. Group I – 1, 13, 26 (dependant claims 2, 7, 12, 14, 15, 16, 18, 19, 21, 27, 28, 29)

The combination of Broadbent, Fay and/or Esposito does not teach producing a Domestic Relation Order as claimed

Claims 1, 13, and 26 each require receiving particular input information related to producing Domestic Relations Orders (DROs), specifically, alternate payee and court information, and producing a court compliant output of a Domestic Relations Order (DRO) using that input information. Broadbent and Esposito are completely silent with respect to DROs and Fay does not show using particular inputs to produce a DRO. The combination does not suggest the claimed invention nor provide any indication how Broadbent could be modified to arrive at the claimed invention. The Examiner is impermissibly relying on the hindsight of the Appellants' disclosure to provide all of the missing details.

As the Examiner has stated "Broadbent does not expressly disclose a domestic relations order." (02/12/2007 Office Action at pg. 3) The Examiner does go on to state that Broadbent does disclose "a receiver for receiving information (Figure 4A, item 401, pg. 9, ¶ [0123], lines 3-8, Broadbent)" (*Id.* at pg. 3). In Broadbent, Figure 4A, item 401 shows the input of a borrower, property and originator date via loan origination gateway and pg. 9, ¶ [0123], lines 3-8, shows "Original inputs from a lender/loan originator come into the system 401 through the 'Loan Originator Gateway' (451 in FIG. 4c) or portal, which serves as an 'entry point' or gateway to the 'pipeline' or system for loan originator data and borrower data." This clearly is not "a receiver for receiving information relating to a domestic relations order, said information comprising an alternate payee and court

information" because this specific information is not included. Broadbent inputs are not even analogous to the inputs for producing a DRO because the required input of a loan originator and borrower focus on information about the lender and borrower to determine if a loan complies with the loan rules, not the destination of an output document that will be generated or its third party beneficiary.

Further, even if, for the sake of this argument only, this were analogous, the combination of Fay does not result in the claimed invention. The Examiner states that "Fay discloses a receiver for receiving information relating to a domestic relations order. (pg. 2 and 8, ¶ [0015] and [0077], lines 1-6 and 1-8;" (See e.g., *Id.* at pg. 3) This provides no direction as to modifications of Broadbent to arrive at the Appellants' claimed invention. Fay shows an annuity calculation system having a variable immediate annuity ("VIA") module 34 which may be affected by the receipt of an issued Qualified Domestic Relations Orders (QDROs). (See. e.g., Fay at ¶ [0077], lines 1-10). Fay, however is silent on the type of information that is received, the type of information needed to generate a QDRO and automated processing of that information to generate a QDRO. Fay does not express producing a DRO. The Examiner states that Fay expresses the "need to provide a defined retirement benefit which will guarantee an individual a minimum defined income level upon the individual's retirement" (See e.g., *Id.* at ¶ [0012], lines 1-3), and that Fay satisfies that need by "providing a user with a plurality of periodic retirement income payments" (See e.g., *Id.* at ¶ [0014], lines 3-5). These cites, however, do not teach or even suggest that producing a DRO is a need or a part of what is required to determine periodic retirement income payments. Broadbent also does not produce a DRO, instead a required set of tasks for a specific loan is produced (See e.g., Broadbent at ¶ [0125], lines 5-9). Combining the Broadbent features of loan originator and borrower input and the Fay feature of receiving a DRO to properly calculate annuities does not result in "a receiver for receiving information relating to a domestic relations order, said information comprising an alternate payee and court information." Neither reference discloses alternate payee and court information. Moreover, even if

alternate payee and court information were disclosed by Fay, there is nothing in Fay to suggest that such inputs would be the needed inputs to be used by an automated system to generate a court compliant DRO.

Moreover, Esposito does not provide what both Broadbent and Fay fail to suggest. Esposito makes no explicit mention of DROs. Further, Esposito, as the Examiner cites it, teaches away from the claimed invention. Specifically, the Examiner cites that Esposito teaches "the invention is a system that complies with reporting and disclosure requirements for employee benefit plans, e.g., ERISA, IRS, other federal law and state reporting and disclosure requirements and electronic communications regulations, as they relate to employee benefit plans" (See e.g., Esposito at ¶ [0008], lines 8-13). The examiner has ignored that Esposito's system complies with the rules by notifying the recipient via e-mail of the required plan communication. (See e.g., *Id.* at ¶ [0045], lines 1-6). This teaches away from the claimed invention because the DROs can be printed and submitted to the proper court, not submitted to a plan participant via e-mail as is done in Esposito. (See e.g., Appellant's Specification at ¶ [0038])

In conclusion, Broadbent, Fay and Esposito, individually or in combination, do not teach modification to produce a DRO in the claimed manner apart from considering the Appellants' invention.

The combination of Broadbent, Fay and/or Esposito does not teach court-compliance

Claims 1, 13 and 26 of the present invention each require an output of a court-compliant DRO. Although Broadbent suggests compliance with Federal, State, local and professional regulations and Esposito suggests compliance with Federal and State rules, Broadbent, Fay and Esposito are completely silent with respect to court-compliance. The combination does not suggest the claimed invention, taken as a whole, nor provide an indication how Broadbent could be modified to arrive at the claimed invention. The

Examiner is impermissibly relying on the hindsight of the Appellants' disclosure to make the leap from the broad statements cited to the Appellants' claimed invention.

Broadbent does not show generating a document that is court-compliant. The Examiner has cited Figure 18, "loan programs that fit the criteria you entered on the previous pages" and page 10, ¶ [0125], lines 5-9 in Broadbent (02/12/2007 Office Action at pg. 5). In Broadbent, "loan programs that fit the criteria you entered on the previous pg.s" in Figure 18 refers to "such data or information is required for originating and underwriting a loan, and typically includes the following: a subscribing loan originator's identification FIG. 7, pertinent information sufficient to identify the pending borrower FIG. 13, and information on the subject property FIG. 14," (See e.g., Broadbent at ¶ [0132], lines 1-6). Further, ¶ [0125], lines 5-9 shows loan data "passed by the system to the Compliance Engine 479 and the Compliance Engine uses these data (the loan data 477 and the user task selections 479) to generate a required set of tasks for this specific loan." This is clearly not "the court information into a court-compliant domestic relations order for submission to a court" nor even analogous to "the court information into a court-compliant domestic relations order for submission to a court." Broadbent's Compliance Engine ensures compliance with Federal, State, local and professional regulations by generating a complying set of tasks for creating a mortgage (See e.g., *Id.* at ¶ [0125], lines 5-9 and ¶ [0026], lines 1-4). That compliance does not extend to or fall within complying with court rules that govern the format for generating a DRO to be reviewed by the court. While both the Broadbent description and the Appellants' claimed inventions comply with rules, compliance with rules is a broad idea which is present in almost all computer systems, and does not teach or suggest how to generate a DRO for court-compliance.

Further, even if, for the sake of this argument only, the generation of tasks to ensure compliance were analogous, the combination of Fay does not result in the claimed invention. Though the Examiner cites Fay pg. 2 and 8, paragraphs [0015] and [0077], lines 1-6 and 1-8 (02/12/2007 Office Action at pg. 5), Fay is completely silent with

respect to generating a court-compliant document. In fact, nowhere in the description cited by the Examiner is there even any teaching on complying with rules. Paragraph 15, lines 1-6 discuss a retirement quoting process and paragraph 77, lines 1-8 discuss an annuity calculation system having a variable immediate annuity ("VIA") module 34 which may be affected by the receipt of an issued Qualified Domestic Relations Orders (QDROs). As argued above, Broadbent also does not show court compliance, but instead complying with the Federal, State, local and professional mortgage loan regulations (See e.g., Broadbent at ¶ [0012], lines 5-11 and ¶ [0026], lines 1-4). Combining the Broadbent features of Federal, State, local and professional mortgage loan regulations compliance with a retirement quoting process and/or a variable immediate annuity calculation affected by the receipt of a DRO does not result in "the court information into a court-compliant domestic relations order for submission to a court." (Appellant's Claim 1) Neither reference discloses generating a DRO for court-compliance. Moreover, even if court-compliance were disclosed by Fay, there is nothing in Fay to suggest such compliance would be the needed compliance to be used by an automated system to generate a court-compliant DRO.

Moreover, Esposito does not provide what both Broadbent and Fay fail to suggest. The Examiner has pointed out that on pg. 1, paragraph [0008], lines 8-13 in Esposito (02/12/2007 Office Action at pg. 5), Esposito teaches compliance with federal and state rules to avoiding "potential penalties assessed by a federal court or government agency for non-compliance". This cited description, however, is not the same as court-compliance needed to generate a DRO. Even though penalties may be issued by a federal court, it is not court regulations for DRO generation that is complied with in Esposito but federal laws, state reporting disclosure requirements and electronic communications regulations, as they relate to employee benefit plans.

In conclusion, Broadbent, Fay and Esposito, individually or in combination, do not teach modification to produce a DRO in the claimed manner apart from considering Appellants' invention.

The combination of Broadbent, Fay and/or Esposito does not teach the use of court information

Claims 1, 13 and 26 of the present invention each require court information. Although Esposito mentions the potential for penalties assessed by a federal court for non-compliance Federal and State rules, Broadbent, Fay and Esposito are completely silent with respect to court-compliance. The combination does not suggest the claimed invention, taken as a whole, nor provide an indication of how Broadbent could be modified to arrive at the claimed invention. The Examiner is impermissibly relying on the hindsight of the Appellants' disclosure to make the leap from the broad statements cited to the Appellants' claimed invention.

As the Examiner has stated "Broadbent in view of Fay is silent with respect to court information." (02/12/2007 Office Action at pg. 4) The Examiner does go on to state that "Esposito does disclose a system similar to the combination of Broadbent in view of Fay's including: court information (pg. 1, ¶ [0008], lines 5-7 and 21-29; Esposito)." *Id.* Although the cite mentions a federal court, mere mention of a court does not indicate the use of that court's information. Esposito shows compliance with reporting and disclosure requirements for employee benefit plans to avoid potential penalties assessed by a federal court and does not show court information. Moreover, even if court information were disclosed by Esposito, there is nothing in Esposito to suggest such court-information would be the needed information to be used by an automated system to generate a court-compliant DRO.

Cohen does not provide what Esposito fails to suggest. The Examiner Cohen as a basis of rejection for claim 27. The examiner cites pg. 4, paragraph [0042], lines 4-8 in Cohen as disclosing bankruptcy case-specific data (02/12/2007 Office Action at pg. 15 to pg. 16). Cohen shows the court, judge, attorney, trustee, issuer, account and a case number related to a bankruptcy filing. As is shown in a preferred embodiment of the

Appellant's Specification, paragraph [0060], the court that will issue the DRO is used to assure that the DRO produced is properly formatted and is not analogous to a field in a database holding court information extracted from a bankruptcy notice to be used for checking if a credit appellant has filed for bankruptcy. Additionally, there is no showing in Cohen regarding how to use bankruptcy case –specific data to produce a DRO and there is nothing to suggest that bankruptcy case-specific data is even the same data needed to produce a DRO. Further, there is nothing in Cohen to suggest modification to use the bankruptcy notice information to produce a DRO.

In conclusion, Broadbent, Fay and Esposito, individually or in combination, do not teach modification to produce a DRO in the claimed manner apart from considering Appellants' invention.

The combination of Broadbent, Fay and/or Esposito does not teach document preparation for submission to a court

Claims 1, 13 and 26 of the present invention each require document generation for submission of that document to a court. Although Broadbent and Esposito suggest providing documents, Broadbent, Fay and Esposito are completely silent with respect to preparing a document for court submission. The combination does not suggest the claimed invention, taken as a whole, nor provide and indication how Broadbent could be modified to arrive at the claimed invention. The Examiner is impermissibly relying on the hindsight of the Appellants' disclosure to make the leap from the broad statements cited to the Appellants' claimed invention.

Broadbent does not show document submission to a court. Though the examiner cites to paragraph [0125], lines 5-9, in Broadbent, Broadbent is completely silent with respect to submitting a document to a court. Again, nowhere in the description cited by the Examiner is there even any teaching on producing a document in preparation for

submission to a court. Paragraph [0125], lines 5-9, discuss a compliance engine that ensures compliance with Federal, State, local and professional regulations by generating a complying set of tasks for creating a mortgage. However, Broadbent does show documents provided by the loan originator to the mortgage appellant (See e.g., Broadbent at ¶ [0092], lines 1-5), documents provided by the mortgage appellant to the loan originator (See e.g., *Id.* at ¶ [0101], lines 12-14), mortgage documents provided by the system to the loan originator, premium broker processor and to the premium broker processor account executive (See e.g., *Id.* at ¶ [0275], lines 16-21), and the system documenting "all attendant processes with compliance to applicable regulatory rule sets and requirements of participating workers." (See e.g., *Id.* at ¶ [0118], lines 10-14). Not one of these documents is produced for submission to a court. Additionally, there is nothing in Broadbent to suggest modification for submitting these documents to a court. While both Broadbent and the Appellant's claimed invention disclose providing a document, providing a document is a broad idea that does not suggest providing a document for submission to a court.

Further, even if, for the sake of argument producing documents for delivery to the parties of a mortgage were analogous to producing a document for court submission the combination of Fay does not result in the claimed invention. Though the Examiner cites Fay pg. 2 and 8, paragraphs [0015] and [0077], lines 1-6 and 1-8 (02/12/2007 Office Action at pg. 5), Fay is completely silent with respect to court submission. In fact, nowhere in the description cited by the Examiner is there even any teaching on court submission. As stated above, paragraph 15, lines 1-6 discuss a retirement quoting process and paragraph 77, lines 1-8 discuss an annuity calculation system having a variable immediate annuity ("VIA") module 34 which may be affected by the receipt of an issued Qualified Domestic Relations Orders (QDROs). Broadbent also does not show court submission, but instead delivering documents to the parties of a mortgage. Combining the Broadbent features delivering documents to the parties of a mortgage with a retirement quoting process and/or a variable immediate annuity calculation affected by

the receipt of a DRO does not result in "the court information into a court-compliant domestic relations order for submission to a court." (Appellant's Claim 1) Neither reference discloses generating a DRO for court submission. Moreover, even if court submission were disclosed by Fay, there is nothing in Fay to suggest such court submission would be the needed court submission to use an automated system to generate a court-compliant DRO.

Moreover, Esposito does not provide what both Broadbent and Fay fail to suggest. The Examiner has pointed out that on pg. 1, paragraph [0008], lines 8-13 in Esposito (02/12/2007 Office Action at pg. 5), Esposito teaches compliance with federal and state rules to avoiding "potential penalties assessed by a federal court or government agency for non-compliance". This cited description, again, does not describe submission to a court. Although penalties may be issued by a federal court, it does not follow that submission of an automatically produced DRO to a court is to occur. Esposito does show an e-mail message including a link to location a document can be viewed by one of the recipients (plan participant(s)) on the recipient list (See e.g., Esposito at ¶ [0045], lines 1-5 and ¶ [0045], lines 1-6). Submission of an e-mail to an employee benefit plan participant is not the same as submission of a DRO to a court.

In conclusion, Broadbent, Fay and Esposito, individually or in combination, do not teach modification to produce a DRO in the claimed manner apart from considering Appellants' invention.

b. Group II – 3, 5, 20, 22

Broadbent, Fay and/or Esposito do not teach using legal representative information

Claims 3, 5, 20, 22 of the present invention each require use of legal representative information. Although Broadbent shows advisors and accountants, Broadbent, Fay and Esposito are completely silent with respect to legal representative information. The combination does not suggest the claimed invention, taken as a whole,

nor provide and indication how Broadbent could be modified to arrive at the claimed invention. The Examiner is impermissibly relying on the hindsight of the Appellants' disclosure to make the leap from the broad statements cited to the Appellants' claimed invention.

Broadbent does not show a legal representative. The examiner cites to Paragraph 0097, lines 1-7, in Broadbent, (02/12/2007 Office Action at pg. 6, pg. 20 and pg. 12) which shows non-legal representatives, "investment advisors, financial advisors, accountants and other professionals may be added to the Program as Loan Originators." (See e.g., Broadbent at ¶ [0097], lines 1-7). In the preferred embodiment, FIG. 12 shows a legal representative as an attorney. Advisors, accountants and loan originators are not legal representatives. While both Broadbent and the Appellant's claimed invention disclose providing representatives, providing a representative is a broad idea that does not suggest providing a legal representative qualified to represent parties of a DRO.

In conclusion, Broadbent, Fay and Esposito, individually or in combination, do not teach modification to produce a DRO in the claimed manner apart from considering Appellants' invention.

c. Group III – 6, 8, 9, 10, 11, 17, 23, 24 and 31

Broadbent, Fay and/or Esposito do not teach rules or information related to DROs

Claims 6, 8, 9, 10, 11, 17, 23, 24 and 31 of the present invention all require rules or information related to DROs. Although Broadbent shows rules and information related to a mortgage and Esposito shows rules and information related to employee benefit plans, Broadbent, Fay and Esposito are completely silent with respect to rules or information related to DROs. The combination does not suggest the claimed invention, taken as a whole, nor provide and indication how Broadbent could be modified to arrive at the claimed invention. The Examiner is impermissibly relying on the hindsight of the

Appellants' disclosure to make the leap from the broad statements cited to the Appellants' claimed invention.

Broadbent does not show rules or information related to DROs. Broadbent has a Compliance Engine which uses a rule-based loan compliance database to generate tasks required to be performed to complete a mortgage (See e.g., Broadbent at ¶ [0051], lines 1-6). The rules and information required to complete a mortgage (e.g., Real Estate Settlement Procedures Act, total cost of the loan (*Id.* at ¶ [0013], lines 1-13)) are not the same rules or information required for a DRO (e.g., format for court submission (Appellant's Specification at ¶ [0039]), or court information (*Id.* at ¶ [0005])). Additionally, there is nothing in Broadbent to suggest modifying the Compliance Engine or information to relate to DROs. While both Broadbent and the Appellant's invention shows the use of rules and information, the use of rules and information is a broad idea which most all computers systems use and does not show the rules or information related to a DRO.

Further, even if, for the sake of this argument only, the rules and information related to mortgages were analogous, the combination of Fay does not result in the claimed invention. Even though Fay shows a QDRO Fay does not use the rules or information related to producing a DRO, Fay simply uses the court issued QDRO as a variable in an annuity calculation. Combining the Broadbent features of rules and information related to mortgages and the Fay feature of receiving a QDRO to properly calculate annuities does not result in rules or information related to DROs. Neither reference discloses rules for the formatting of a DRO or alternate payee and court information. Moreover, even if rules for the formatting of a DRO, alternate payee and court information were disclosed by Fay, there is nothing in Fay to suggest that such rules and information would be the rules and information needed for an automated system to generate a court compliant DRO.

Moreover, Esposito does not provide what both Broadbent and Fay fail to suggest. Esposito makes no explicit mention of rules or information related to DROs. The

Examiner cites Esposito paragraph 0068, lines 14-25. The cite is completely silent with respect to rules, though it shows the information of a user name, ID number, personal identification number, password, plan, state of user session, etc. This information is not the same information required, alternate payee and court information, to generate a court compliant DRO. Even though information is used, it is not the information required for a DRO.

In conclusion, Broadbent, Fay and Esposito, individually or in combination, do not teach modification to produce a DRO in the claimed manner apart from considering Appellants' invention.

SUMMARY CONCLUSION OF ALL ARGUMENTS

The Examiner has not met the initial burden of establishing a prima facie case for obviousness. As described in the MPEP § 2143:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

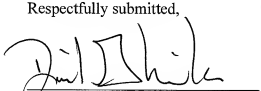
As argued herein, there is no motivation and further, the combinations made by the Examiner do not teach or suggest all the claim limitations. The invention must be considered as a whole and the Examiner cannot simply chose references using the claim elements as a guide.

Further, as stated many times, the Examiner has simply ignored claim limitations, abstracting some claim limitations to a general concept to enable the Examiner's obviousness rejections. It is clear, however, that the type of data and/or the use of specific data can be patentable and must be considered. For example, just because automating processes is known, this does not mean that automating the production of a court-compliant DRO for court submission is obvious. Similarly, DRO's are received by many agencies, for many purposes, e.g. used as a variable in an annuity calculation as in Fay. However, this does not mean that *any* mention of a DRO makes it obvious to produce a court-compliant DRO. While Broadbent does show producing documents, producing documents is an ancillary function of Broadbent which is used to show ensure compliance required tasks for executing a mortgage and does not contemplate the system claimed by the Appellant. While the Examiner keeps arguing the inherent capability of the Broadbent system to be capable of automatically producing a DRO as claimed by the Appellant and to be capable of performing the functions as claimed by the appellant,

there is no question that the Broadbent system would need to be reconfigured to do so. Besides the Appellant's own specification, there is *very little, if any* guidance on the record on how that would be done. The Examiner seems to be relying mostly on the knowledge of one skilled in the art. However, there is nothing indicating that one skilled in the art would have the knowledge, without reading the Appellant's specification, to make the modifications necessary to produce a court-compliant DRO for court submission.

In view of the foregoing authorities, remarks, and the inability of the references, alone or in combination, to anticipate, teach, or suggest the subject matter as a whole of the invention disclosed and claimed in this application, the decision of the Examiner rejecting claims 1-3, 3-24, and 26-31 should be reversed.

Respectfully submitted,



David G. Miranda
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One International Place
Boston, MA 02110
Telephone: 617-526-9600
Facsimile: 617-526-9899

(viii) CLAIMS APPENDIX

1. A computerized system for producing a domestic relations order comprising:

a receiver for receiving information relating to a domestic relations order, said information comprising an alternate payee and court information;

a rules engine in communication with the receiver for selecting sample text passages; and

a document assembler for automatically incorporating a first subset of the sample text passages and a second subset of the received information comprising the alternate payee and the court information into a court-compliant domestic relations order for submission to a court.

2. The system of a claim 1 wherein the received information comprises information associated with a participant in an employee benefit plan.

3. The system of a claim 2 wherein the received information comprises information associated with a legal representative of the participant.

5. The system of claim 3 wherein the received information comprises information associated with a legal representative of the alternate payee.

6. The system of claim 1 further including a data storage device for storing rules relating to a domestic relations order.

7. The system of claim 6 wherein the data storage device further stores sample text passages.

8. The system of claim 7 wherein the sample text passages relate to a domestic relations order.

9. The system of claim 6 wherein the rules engine further selects the first subset of the sample text passages based, at least in part, on the stored rules.

10. The system of claim 1 wherein the rules engine further selects the first subset of the sample passages based, at least in part, on the received information.

11. The system of claim 6 wherein the document assembler receives additional information from the data storage device, the additional information having been previously included in a domestic relations order.

12. The system of claim 1 further comprising an administrative module for maintaining the rules engine.

13. A computerized method for producing a domestic relations order, comprising:

providing a plurality of sample text passages relating to domestic relations orders, the sample text passages including embedded parameters comprising an alternate payee and court information;

requesting information for inclusion into a domestic relations order, the requested information including values for one or more of the embedded parameters;

receiving the requested information; and

automatically assembling a court-compliant domestic relations order for submission to a court using a first subset of the sample text passages and a second subset of the requested information.

14. The method of claim 13 further comprising receiving the requested information over an electronic communications network.

15. The method of claim 14 wherein the electronic communications network is one of a local area network, a wide area network, a telephone network, an intranet, the Internet, or any combination thereof.

16. The method of claim 13 further comprising receiving the requested information through an online questionnaire.

17. The method of claim 13 further comprising receiving at least a subset of the requested information from a previously completed domestic relations order.

18. The method of claim 13 further comprising receiving at least a subset of the requested information associated with a participant in an employee benefit plan.

19. The method of claim 18 wherein the employee benefits plan comprises a defined contribution plan, a defined benefit plan, or both.

20. The method of claim 13 further comprising receiving subset of the requested information associated with a legal representative of a participant in an employee benefit plan.

21. The method of claim 13 further comprising receiving a subset of the requested information from an alternate payee of an employee benefit plan.

22. The method of claim 21 further comprising receiving at least a subset of the requested information associated with a legal representative of the alternate payee of an employee benefit plan.

23. The method of claim 22 further comprising providing a set of rules relating to generating a domestic relations order.

24. The method of claim 23 wherein automatically assembling the court-compliant domestic relations order comprises determining the subset of the sample text passages based, at least in part, on the rules.

26. A computerized system for producing a domestic relations order, comprising:

means for storing sample text passages for inclusion into a domestic relations order, the sample text passages including embedded parameters comprising an alternate payee, and court information;

means for receiving information about a first domestic relations order, the information providing values for one or more of the embedded parameters; and

means for automatically assembling a court-compliant domestic relations order for submission to a court using a first subset of the stored sample text passages and at least a second subset of the received information.

27. The system of claim 1 wherein said court information comprises a case number.

28. The method of claim 16 further comprising determining one or more questions for the online questionnaire based on a rules engine and a subset of the requested information.

29. The method of claim 13 wherein assembling comprises using a document template.

30. The method of claim 29 wherein automatically assembling the court-compliant domestic relations order comprises using a subset of the requested information as input for one or more parameter fields of the document template.

31. The system of claim 1 wherein the court-compliant domestic relations order is assembled according to one or more predefined document formats.

(ix) EVIDENCE APPENDIX

Broadbent et al U.S. Patent Application Publication 2001/0047326, in view of Fay et al. U.S. Patent Application Publication 2002/0188540, and view of Esposito U.S. Patent Application Publication 2001/0051906, and further in view of Cohen et al. U.S. Patent Application Publication 2004/0064404.

A. Broadbent et al U.S. Patent Application Publication 2001/0047326

Citation entered in the record by examiner in Notice of References Cited contained in July 6, 2006 Office Action and the February 12, 2007 Final Rejection.

B. Fay et al. U.S. Patent Application Publication 2002/0188540

Citation entered in the record by examiner in Notice of References Cited contained in July 6, 2006 Office Action and the February 12, 2007 Final Rejection. .

C. Esposito U.S. Patent Application Publication 2001/0051906

Citation entered in the record by examiner in Notice of References Cited contained in the February 12, 2007 Final Rejection.

D. Cohen et al. U.S. Patent Application Publication 2004/0064404

Citation entered in the record by examiner in Notice of References Cited contained in the February 12, 2007 Final Rejection.

E. Final Rejection

Final rejection entered by the examiner February 12, 2007.

(x) RELATED PROCEEDINGS APPENDIX

None

(ix) Evidence Appendix

US 20010047326A1

A.

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2001/0047326 A1**

Broadbent et al. (43) **Pub. Date: Nov. 29, 2001**

(54) **INTERFACE SYSTEM FOR A MORTGAGE LOAN ORIGINATOR COMPLIANCE ENGINE**

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(21) Appl. No.: **09/804,943**

(22) Filed: **Mar. 13, 2001**

Related U.S. Application Data

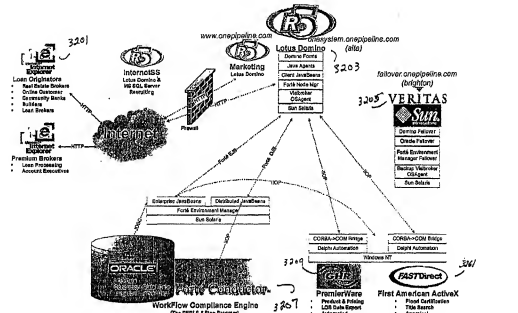
(63) Continuation-in-part of application No. 09/645,217, filed on Aug. 24, 2000, which is a non-provisional of provisional application No. 60/189,635, filed on Mar. 14, 2000.

Publication Classification

(51) **Int. Cl.**[7] **G06F 17/60**
(52) **U.S. Cl.** **705/38**; 705/37

(57) **ABSTRACT**

The present invention provides a solution to the needs described above through a system and processe to be used in the mortgage industry for combining an Loan Application System with an automated Compliance Engine used for generating and monitoring a set of required procedures involved in moving and tracking a mortgage loan through one or more of the steps of 'originate', 'approve', 'close', 'fund', and 'ship'. The automated compliance engine itself is a system and method for automatically generating a set of required tasks for use in managing the mortgage loan process, including tasks required by applicably federal or state law. The system of the present invention automatically couples the regulatory compliance information engine and a task management system required to process loans and provides methods for integrating the Automate Compliance Engine technology with any third party's loan processing software.



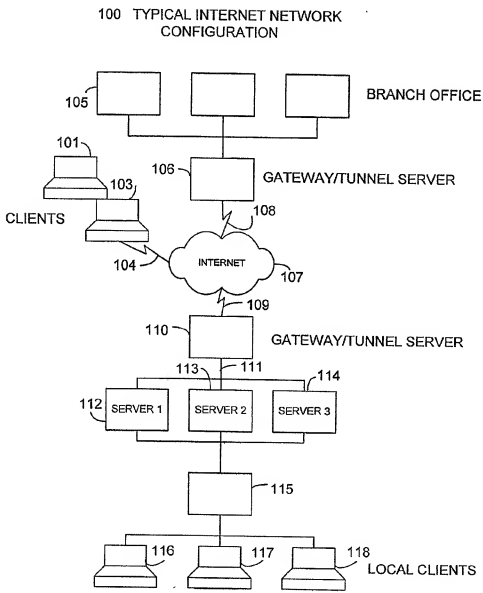

100 TYPICAL INTERNET NETWORK CONFIGURATION
105
BRANCH OFFICE
101
106
GATEWAY/TUNNEL SERVER
103
CLIENTS
108
104
INTERNET
107
109
110
GATEWAY/TUNNEL SERVER
113
111
114
112
SERVER 1
SERVER 2
SERVER 3
115
116
117
118
LOCAL CLIENTS

FIG. 1

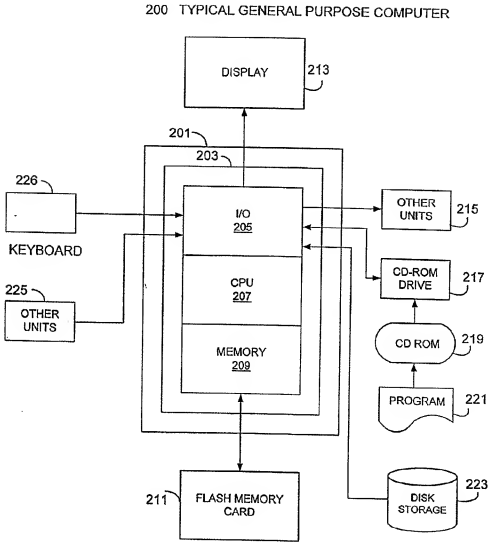

200 TYPICAL GENERAL PURPOSE COMPUTER
DISPLAY
213
201
203
226
KEYBOARD
225
OTHER UNITS
I/O 205
CPU 207
MEMORY 209
OTHER UNITS
215
CD-ROM DRIVE
217
CD ROM
219
PROGRAM
221
211
FLASH MEMORY CARD
DISK STORAGE
223

FIG. 2

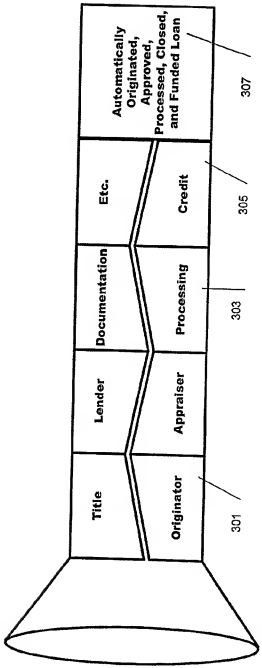

Title
Lender
Documentation
Etc.
Originator
Appraiser
Processing
Credit
Automatically Originated, Approved, Processed, Closed, and Funded Loan
301
303
305
307

Figure 3

Figure 4A

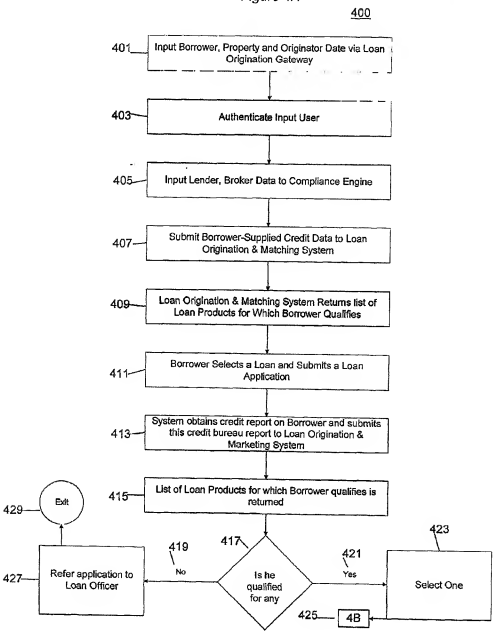
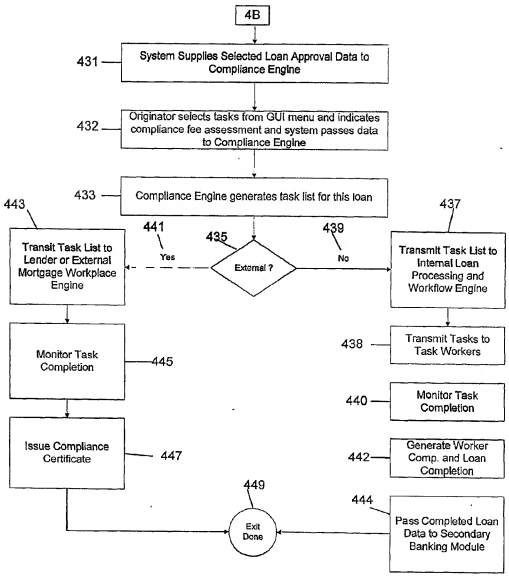

400
401
Input Borrower, Property and Originator Date via Loan Origination Gateway
403
Authenticate Input User
405
Input Lender, Broker Data to Compliance Engine
407
Submit Borrower-Supplied Credit Data to Loan Origination & Matching System
409
Loan Origination & Matching System Returns list of Loan Products for Which Borrower Qualifies
411
Borrower Selects a Loan and Submits a Loan Application
413
System obtains credit report on Borrower and submits this credit bureau report to Loan Origination & Marketing System
415
List of Loan Products for which Borrower qualifies is returned
417
Is he qualified for any
419
No
421
Yes
423
Select One
425
4B
427
Refer application to Loan Officer
429
Exit

Figure 4B


4B
431
System Supplies Selected Loan Approval Data to Compliance Engine
432
Originator selects tasks from GUI menu and indicates compliance fee assessment and system passes data to Compliance Engine
433
Compliance Engine generates task list for this loan
435
External ?
441
Yes
439
No
443
Transit Task List to Lender or External Mortgage Workplace Engine
437
Transmit Task List to Internal Loan Processing and Workflow Engine
Monitor Task Completion
445
438
Transmit Tasks to Task Workers
440
Monitor Task Completion
Issue Compliance Certificate
447
442
Generate Worker Comp. and Loan Completion
449
Exit Done
444
Pass Completed Loan Data to Secondary Banking Module

A.

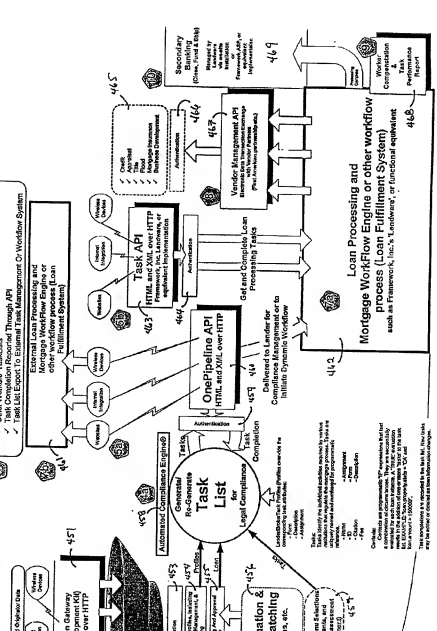

Borrower Status Reports
Originator's TaskList
Other Workers' TaskLists
Task List Export To External Task Management Or Workflow System
External Loan Processing and Mortgage WorkFlow Engine or other workflow process (Loan Fulfillment System)
Loan Origination Gateway (Borrower Interface) HTML and XML over HTTP
Loan Origination & Program Matching GMI Systems, etc.
Additional Compliance Engine(s)
General Rule-Driven Task List for Legal Compliance
OnePipeline API HTML and XML over HTTP
Task API HTML and XML over HTTP
Get and Complete Loan Processing Tasks
Vendor Management API HTML and XML over HTTP
Loan Processing and Mortgage WorkFlow Engine or other workflow process (Loan Fulfillment System) such as Framework, Inc.'s 'Loanliversy' or functional equivalent
Secondary Marketing
Work Completion & Performance Report

Figure 4C

A.

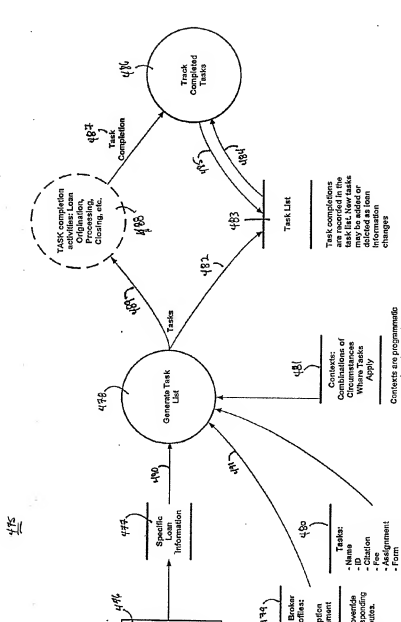
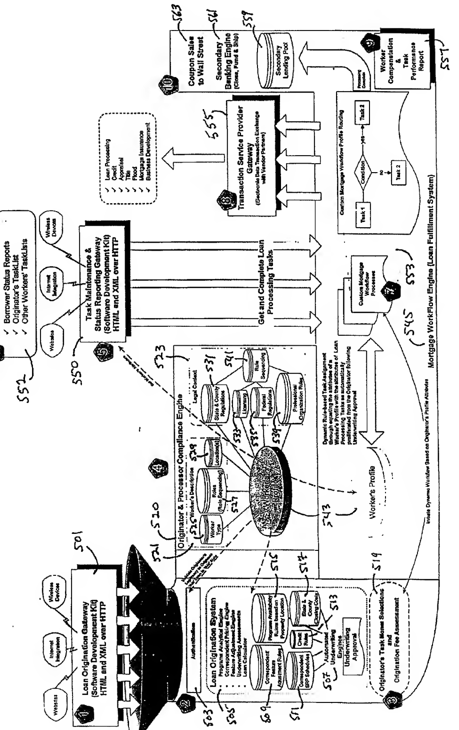

Loan Originator
Specific Loan Information
Generate Task List
Tasks
TASK completion activities: Loan Origination, Processing, Closing, etc.
Task Completion
Track Completed Tasks
Task List
Contexts: Combinations of Circumstances Which Tasks Apply
Tasks:
- Name
- ID
- Citation
- Due
- Assignment
- Form
- Description
Tasks identify the individual activities required by various institutions that must be performed in a loan process. Tasks are uniquely named and numbered for programmatic reference.
Contexts are programmatic representations for a combination of circumstances. They are sequentially evaluated for the entire transaction. Identifies one or more 'Tasks' for inclusion on the task list.
Task completions are recorded in the system. Later tasks may be added or deleted as loan circumstances change

Figure 4D

Figure 5


Loan Origination Gateway (Software Development Kit) HTML and XML over HTTP
Websites
Internet Integration
Wireless Devices
Authentication
Loan Origination System
Originator & Processor Compliance Engine
Worker's Profile
Legal Context
Task Maintenance & Status Reporting Gateway (Software Development Kit) HTML and XML over HTTP
Borrower Status Reports
Originator's TaskList
Other Workers' TaskLists
Get and Complete Loan Processing Tasks
Transaction Service Provider Gateway
Coupon Sales to Wall Street
Secondary Banking Engine
Secondary Lending Pool
Worker Compensation & Task Performance Report
Custom Mortgage Workflow Processes
Mortgage WorkFlow Engine (Loan Fulfillment System)
Originator's Task Bonus Selections and Origination Fee Assessment
Underwriting Approval
Automated Underwriting Engines
501
503
505
507
509
511
513
515
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520
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A.

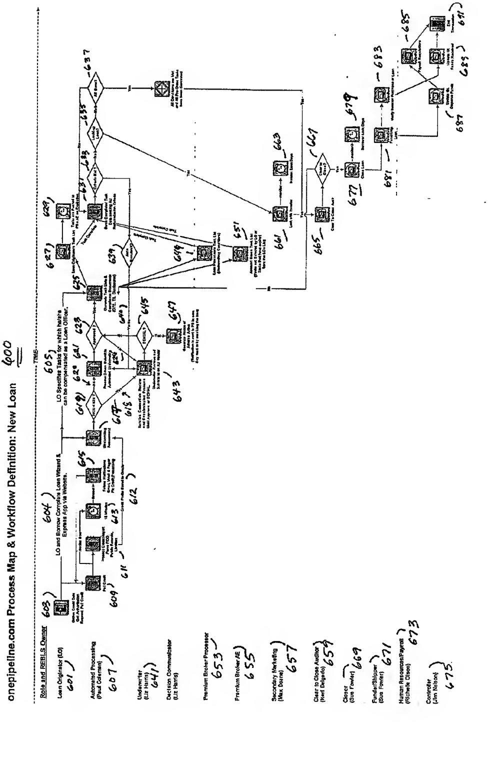
Figure 6
onepipeline.com Process Map & Workflow Definition: New Loan
600
TIME
Role and REBLS Owner
Loan Originator (LO)
601
Automated Processing (Paul Coleman)
607
Underwriter (Liz Harris)
641
Decision Communicator (Liz Harris)
Premium Broker Processor
653
Premium Broker AE
655
Secondary Marketing (Max Doane)
657
Clear to Close Auditor (Kerl Delgado)
659
Closer (Sue Fowler)
669
Funder/Shipper (Sue Fowler)
671
Human Resources/Payroll (Richelle Olson)
673
Controller (Jim Nelson)
675
LO and Borrow Complete Loan Wizard & Express App Via Website.
604
LO Specifies Tasks for which he/she can be compensated as a Loan Officer.
605
603
609
611
613
615
612
617
618
619
620
621
623
624
625
627
629
631
633
635
637
639
640
643
645
647
649
651
661
663
665
667
677
679
681
683
685
687
689
691

Need to ask a question?
Click here for help.
Member Login
"The OnePipeline.com System is simple, fast and profitable."
Instructions: Welcome to the OnePipeline Loan Origination System. Please sign in.
New Users
Sign Up Now
Members
User Name
Password
I Forget My Password.
Return to HomePage

Figure 7

A.

Need to ask a question?
Click here for help.
Main Menu
"We created a better way to originate a loan."
Welcome Joe Realtor
Enter the Loan Origination System
Start a Loan
Task List
Check Loan Status
Get More Info
Tools and Resources
OnePipeline University
Benefits
Marketing Support Tools
Modify My Account
Log Out
Return to HomePage

Figure 8

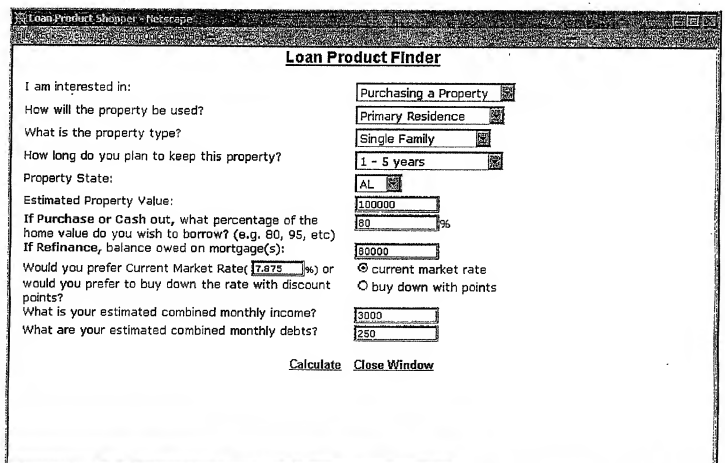
Loan Product Shopper - Netscape
Loan Product Finder
I am interested in:
Purchasing a Property
How will the property be used?
Primary Residence
What is the property type?
Single Family
How long do you plan to keep this property?
1 - 5 years
Property State:
AL
Estimated Property Value:
100000
If Purchase or Cash out, what percentage of the home value do you wish to borrow? (e.g. 80, 95, etc)
80
%
If Refinance, balance owed on mortgage(s):
80000
Would you prefer Current Market Rate(7.875 %) or would you prefer to buy down the rate with discount points?
current market rate
buy down with points
What is your estimated combined monthly income?
3000
What are your estimated combined monthly debts?
250
Calculate
Close Window

Figure 9

A.

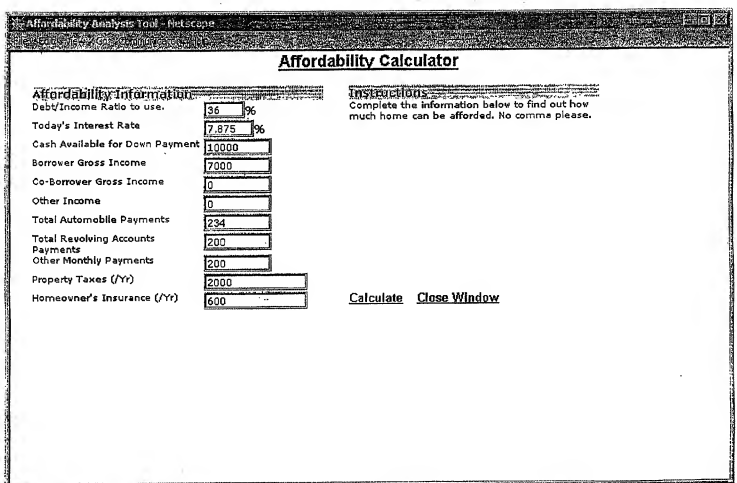
Affordability Analysis Tool - Netscape
Affordability Calculator
Affordability Information
Debt/Income Ratio to use.
36
%
Today's Interest Rate
7.875
%
Cash Available for Down Payment
10000
Borrower Gross Income
7000
Co-Borrower Gross Income
0
Other Income
0
Total Automobile Payments
234
Total Revolving Accounts Payments
200
Other Monthly Payments
200
Property Taxes (/Yr)
2000
Homeowner's Insurance (/Yr)
600
Instructions
Complete the information below to find out how much home can be afforded. No comma please.
Calculate
Close Window

Figure 10

A.

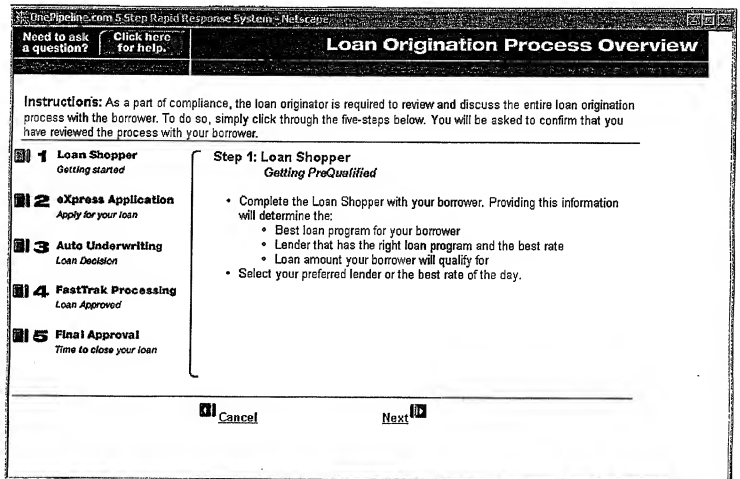
OnePipeline.com 5 Step Rapid Response System - Netscape
Need to ask a question?
Click here for help.
Loan Origination Process Overview
Instructions: As a part of compliance, the loan originator is required to review and discuss the entire loan origination process with the borrower. To do so, simply click through the five-steps below. You will be asked to confirm that you have reviewed the process with your borrower.
1 Loan Shopper
Getting started
2 eXpress Application
Apply for your loan
3 Auto Underwriting
Loan Decision
4 FastTrak Processing
Loan Approved
5 Final Approval
Time to close your loan
Step 1: Loan Shopper
Getting PreQualified
• Complete the Loan Shopper with your borrower. Providing this information will determine the:
◦ Best loan program for your borrower
◦ Lender that has the right loan program and the best rate
◦ Loan amount your borrower will qualify for
• Select your preferred lender or the best rate of the day.
Cancel
Next

Figure 11

A.

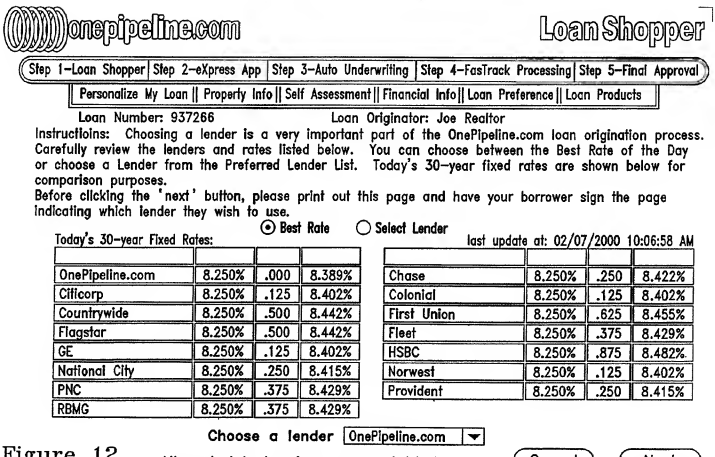
onepipeline.com
Loan Shopper
Step 1–Loan Shopper
Step 2–eXpress App
Step 3–Auto Underwriting
Step 4–FasTrack Processing
Step 5–Final Approval
Personalize My Loan
Property Info
Self Assessment
Financial Info
Loan Preference
Loan Products
Loan Number: 937266
Loan Originator: Joe Realtor
Instructions: Choosing a lender is a very important part of the OnePipeline.com loan origination process. Carefully review the lenders and rates listed below. You can choose between the Best Rate of the Day or choose a Lender from the Preferred Lender List. Today's 30-year fixed rates are shown below for comparison purposes.
Before clicking the 'next' button, please print out this page and have your borrower sign the page indicating which lender they wish to use.
Best Rate
Select Lender
Today's 30-year Fixed Rates:
last update at: 02/07/2000 10:06:58 AM
OnePipeline.com 8.250% .000 8.389%
Citicorp 8.250% .125 8.402%
Countrywide 8.250% .500 8.442%
Flagstar 8.250% .500 8.442%
GE 8.250% .125 8.402%
National City 8.250% .250 8.415%
PNC 8.250% .375 8.429%
RBMG 8.250% .375 8.429%
Chase 8.250% .250 8.422%
Colonial 8.250% .125 8.402%
First Union 8.250% .625 8.455%
Fleet 8.250% .375 8.429%
HSBC 8.250% .875 8.482%
Norwest 8.250% .125 8.402%
Provident 8.250% .250 8.415%
Choose a lender
OnePipeline.com
All materials herein are copyrighted
Cancel
Next

Figure 12

A.

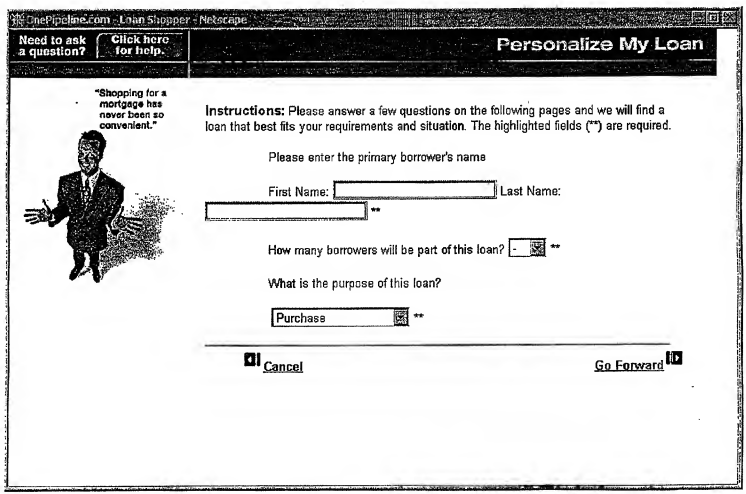
OnePipeline.com - Loan Shopper - Netscape
Need to ask a question?
Click here for help.
Personalize My Loan
"Shopping for a mortgage has never been so convenient."
Instructions: Please answer a few questions on the following pages and we will find a loan that best fits your requirements and situation. The highlighted fields (**) are required.
Please enter the primary borrower's name
First Name:
Last Name:
**
How many borrowers will be part of this loan? - **
What is the purpose of this loan?
Purchase **
Cancel
Go Forward

Figure 13

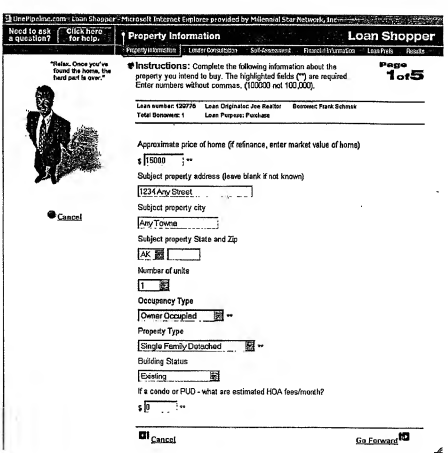
Need to ask a question? Click here for help.
Property Information
Loan Shopper
Property Information
Lender Consultation
Self-Assessment
Financial Information
Loan Profile
Results
"Relax. Once you've found the home, the hard part is over."
Instructions: Complete the following information about the property you intend to buy. The highlighted fields (*) are required. Enter numbers without commas. (100000 not 100,000).
Page 1 of 5
Loan number: 120776
Loan Originator: Joe Realtor
Borrower: Frank Schmoe
Total Borrowers: 1
Loan Purpose: Purchase
Approximate price of home (if refinance, enter market value of home)
$ 15000 **
Subject property address (leave blank if not known)
1234 Any Street
Subject property city
Any Towne
Subject property State and Zip
AK
Number of units
1
Occupancy Type
Owner Occupied **
Property Type
Single Family Detached **
Building Status
Existing
If a condo or PUD - what are estimated HOA fees/month?
$ 0 **
Cancel
Go Forward

Figure 14

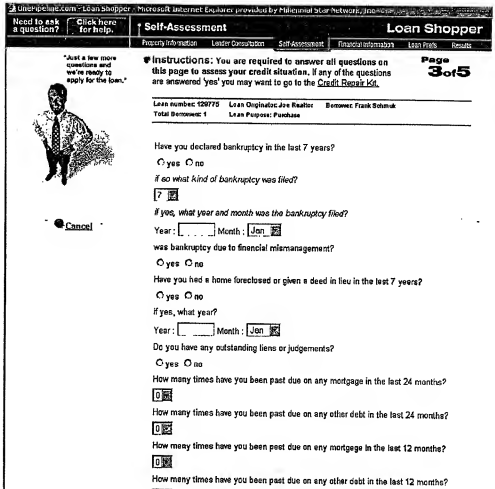
LoanPipeline.com - Loan Shopper - Microsoft Internet Explorer provided by Millennial Star Network, Inc.
Need to ask a question? Click here for help.
Self-Assessment
Loan Shopper
Property Information
Lender Consultation
Self-Assessment
Financial Information
Loan Profile
Results
"Just a few more questions and we're ready to apply for the loan."
Instructions: You are required to answer all questions on this page to assess your credit situation. If any of the questions are answered 'yes' you may want to go to the Credit Repair kit.
Page 3 of 5
Loan number: 129775
Loan Originator: Joe Realtor
Borrower: Frank Schmuk
Total Borrowers: 1
Loan Purpose: Purchase
Have you declared bankruptcy in the last 7 years?
yes no
If so what kind of bankruptcy was filed?
7
If yes, what year and month was the bankruptcy filed?
Year: Month: Jan
was bankruptcy due to financial mismanagement?
yes no
Have you had a home foreclosed or given a deed in lieu in the last 7 years?
yes no
If yes, what year?
Year: Month: Jan
Do you have any outstanding liens or judgements?
yes no
How many times have you been past due on any mortgage in the last 24 months?
0
How many times have you been past due on any other debt in the last 24 months?
0
How many times have you been past due on any mortgage in the last 12 months?
0
How many times have you been past due on any other debt in the last 12 months?
0
How long do you expect to be in the home?
Citizenship Status
Cancel
Go Back
Go Forward

Figure 15

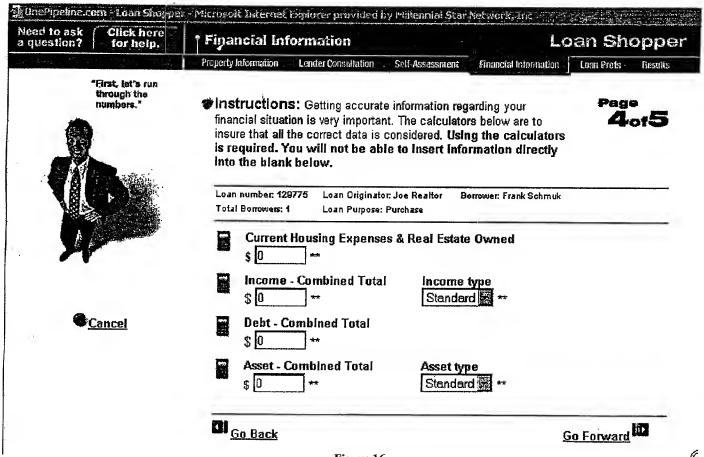
OnePipeline.com - Loan Shopper - Microsoft Internet Explorer provided by Millennial Star Network, Inc
Need to ask a question?
Click here for help.
Financial Information
Loan Shopper
Property Information
Lender Consultation
Self-Assessment
Financial Information
Loan Profs
Results
"First, let's run through the numbers."
Instructions: Getting accurate information regarding your financial situation is very important. The calculators below are to insure that all the correct data is considered. Using the calculators is required. You will not be able to insert information directly into the blank below.
Page 4 of 5
Loan number: 129775
Loan Originator: Joe Realtor
Borrower: Frank Schmuk
Total Borrowers: 1
Loan Purpose: Purchase
Current Housing Expenses & Real Estate Owned
$ 0 **
Income - Combined Total
$ 0 **
Income type
Standard **
Debt - Combined Total
$ 0 **
Asset - Combined Total
$ 0 **
Asset type
Standard **
Cancel
Go Back
Go Forward

Figure 16

A.

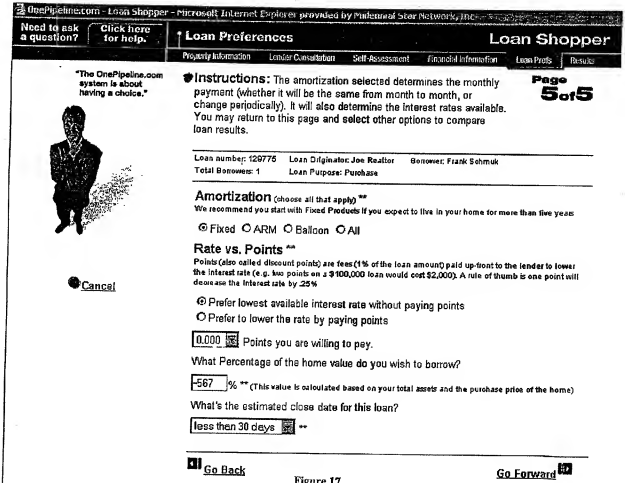
OnePipeline.com - Loan Shopper - Microsoft Internet Explorer provided by Preferred Star Networks, Inc.
Need to ask a question?
Click here for help.
Loan Preferences
Loan Shopper
Property Information
Lender Consultation
Self-Assessment
Financial Information
Loan Profs
Results
"The OnePipeline.com system is about having a choice."
Instructions: The amortization selected determines the monthly payment (whether it will be the same from month to month, or change periodically). It will also determine the interest rates available. You may return to this page and select other options to compare loan results.
Page 5 of 5
Loan number: 129775
Loan Originator: Joe Realtor
Borrower: Frank Schmuk
Total Borrowers: 1
Loan Purpose: Purchase
Amortization (choose all that apply) **
We recommend you start with Fixed Products if you expect to live in your home for more than five years
Fixed
ARM
Balloon
All
Rate vs. Points **
Points (also called discount points) are fees (1% of the loan amount) paid up-front to the lender to lower the interest rate (e.g. two points on a $100,000 loan would cost $2,000). A rule of thumb is one point will decrease the interest rate by .25%
Prefer lowest available interest rate without paying points
Prefer to lower the rate by paying points
0.000 Points you are willing to pay.
What Percentage of the home value do you wish to borrow?
-567 % ** (This value is calculated based on your total assets and the purchase price of the home)
What's the estimated close date for this loan?
less than 30 days **
Cancel
Go Back
Go Forward

Figure 17

A.

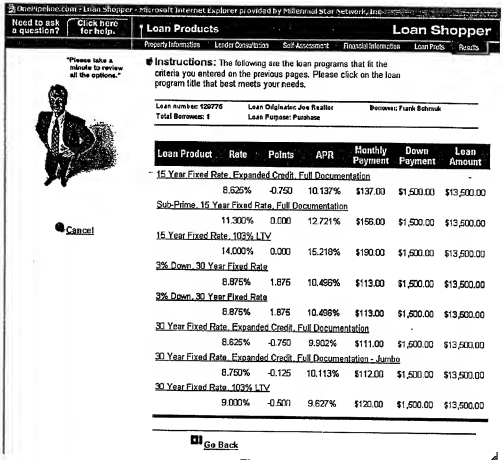
OnePipeline.com - Loan Shopper - Microsoft Internet Explorer provided by Millennial Star Network, Inc.
Need to ask a question?
Click here for help.
Loan Products
Loan Shopper
Property Information
Lender Consultation
Self-Assessment
Financial Information
Loan Profile
Results
"Please take a minute to review all the options."
Instructions: The following are the loan programs that fit the criteria you entered on the previous pages. Please click on the loan program title that best meets your needs.
Loan number: 129776
Loan Originator: Joe Realtor
Borrower: Frank Bohmak
Total Borrower: 1
Loan Purpose: Purchase
Loan Product
Rate
Points
APR
Monthly Payment
Down Payment
Loan Amount
15 Year Fixed Rate, Expanded Credit, Full Documentation
8.625% -0.750 10.137% $137.00 $1,500.00 $13,500.00
Sub-Prime, 15 Year Fixed Rate, Full Documentation
11.300% 0.000 12.721% $156.00 $1,500.00 $13,500.00
15 Year Fixed Rate, 103% LTV
14.000% 0.000 15.218% $190.00 $1,500.00 $13,500.00
3% Down, 30 Year Fixed Rate
8.875% 1.875 10.498% $113.00 $1,500.00 $13,500.00
3% Down, 30 Year Fixed Rate
8.875% 1.875 10.498% $113.00 $1,500.00 $13,500.00
30 Year Fixed Rate, Expanded Credit, Full Documentation
8.625% -0.750 9.902% $111.00 $1,500.00 $13,500.00
30 Year Fixed Rate, Expanded Credit, Full Documentation - Jumbo
8.750% -0.125 10.113% $112.00 $1,500.00 $13,500.00
30 Year Fixed Rate, 103% LTV
9.000% -0.500 9.627% $120.00 $1,500.00 $13,500.00
Cancel
Go Back

Figure 18

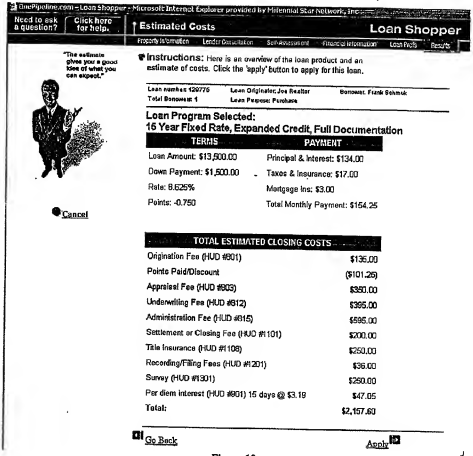
TimePipeline.com - Loan Shopper - Microsoft Internet Explorer provided by Millennial Star Network, Inc.
Need to ask a question?
Click here for help.
Estimated Costs
Loan Shopper
Property Information
Lender Qualification
Self-Assessment
Financial Information
Loan Facts
Results
"The estimate gives you a good idea of what you can expect."
Instructions: Here is an overview of the loan product and an estimate of costs. Click the 'apply' button to apply for this loan.
Loan number: 120776
Total Borrower: 1
Loan Originator: Joe Realtor
Loan Purpose: Purchase
Borrower: Frank Schmidt
Loan Program Selected:
15 Year Fixed Rate, Expanded Credit, Full Documentation
TERMS
PAYMENT
Loan Amount: $13,500.00
Down Payment: $1,500.00
Rate: 8.625%
Points: -0.750
Principal & Interest: $134.00
Taxes & Insurance: $17.00
Mortgage Ins: $3.00
Total Monthly Payment: $154.25
Cancel
TOTAL ESTIMATED CLOSING COSTS
Origination Fee (HUD #801) $135.00
Points Paid/Discount ($101.25)
Appraisal Fee (HUD #803) $350.00
Underwriting Fee (HUD #812) $395.00
Administration Fee (HUD #815) $595.00
Settlement or Closing Fee (HUD #1101) $200.00
Title Insurance (HUD #1108) $250.00
Recording/Filing Fees (HUD #1201) $38.00
Survey (HUD #1301) $250.00
Per diem interest (HUD #901) 15 days @ $3.19 $47.85
Total: $2,157.60
Go Back
Apply

Figure 19

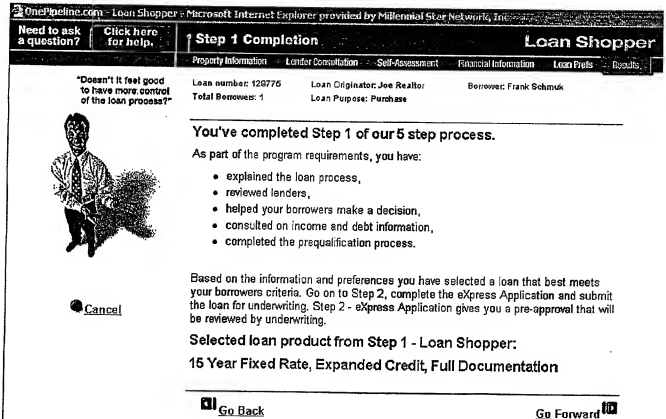
OnePipeline.com - Loan Shopper - Microsoft Internet Explorer provided by Millennial Star Network, Inc.
Need to ask a question?
Click here for help.
Step 1 Completion
Loan Shopper
Property Information
Lender Consultation
Self-Assessment
Financial Information
Loan Prefs
Results
"Doesn't it feel good to have more control of the loan process?"
Loan number: 129775
Total Borrowers: 1
Loan Originator: Joe Realtor
Loan Purpose: Purchase
Borrower: Frank Schmuk
You've completed Step 1 of our 5 step process.
As part of the program requirements, you have:
explained the loan process,
reviewed lenders,
helped your borrowers make a decision,
consulted on income and debt information,
completed the prequalification process.
Cancel
Based on the information and preferences you have selected a loan that best meets your borrowers criteria. Go on to Step 2, complete the eXpress Application and submit the loan for underwriting. Step 2 - eXpress Application gives you a pre-approval that will be reviewed by underwriting.
Selected loan product from Step 1 - Loan Shopper:
15 Year Fixed Rate, Expanded Credit, Full Documentation
Go Back
Go Forward

Figure 20

A.

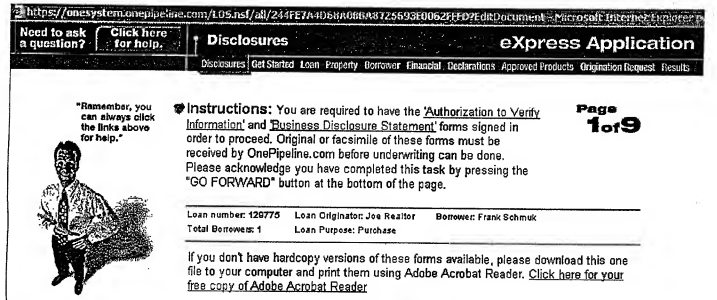
https://onesystem.onepipeline.com/LOS.nsf/all/244FE7A4DB8A086A8725693E0062FED2?EditDocument - Microsoft Internet Explorer
Need to ask a question?
Click here for help.
Disclosures
eXpress Application
Disclosures
Get Started
Loan
Property
Borrower
Financial
Declarations
Approved Products
Origination Request
Results
"Remember, you can always click the links above for help."
Instructions: You are required to have the 'Authorization to Verify Information' and 'Business Disclosure Statement' forms signed in order to proceed. Original or facsimile of these forms must be received by OnePipeline.com before underwriting can be done. Please acknowledge you have completed this task by pressing the "GO FORWARD" button at the bottom of the page.
Page 1 of 9
Loan number: 129775
Loan Originator: Joe Realtor
Borrower: Frank Schmuk
Total Borrowers: 1
Loan Purpose: Purchase
If you don't have hardcopy versions of these forms available, please download this one file to your computer and print them using Adobe Acrobat Reader. Click here for your free copy of Adobe Acrobat Reader
Disclosures.pdf
Save
Has your borrower signed the Authorization and Disclosure forms?
By clicking "Go Forward" you acknowledge you have completed this important program requirement and are ready to complete the eXpress Application. After you submit the loan, please fax these forms to OnePipeline.com toll-free 1-877-695-6900.
Delete
Go Forward

Figure 21

A.

A.

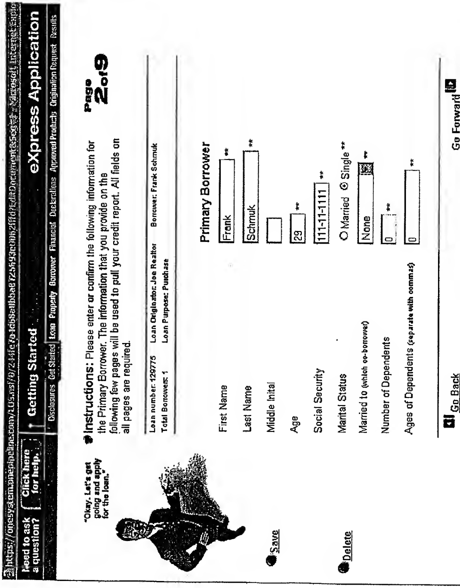
Need to ask a question?
Click here for help.
Getting Started
eXpress Application
Disclosures Get Started Loan Property Borrower Financial Declarations Approved Products Origination Request Results
"Okay. Let's get going and apply for the loan."
Instructions: Please enter or confirm the following information for the Primary Borrower. The information that you provide on the following few pages will be used to pull your credit report. All fields on all pages are required.
Page 2 of 9
Loan number: 129775
Total Borrowers: 1
Loan Originator: Joe Realtor
Loan Purpose: Purchase
Borrower: Frank Schmuk
Primary Borrower
First Name
Frank
Last Name
Schmuk
Middle Inital
Age
29
Social Security
111-11-1111
Marital Status
Married
Single
Married to (which co-borrower)
None
Number of Dependents
0
Ages of Dependents (separate with commas)
0
Save
Delete
Go Back
Go Forward

Figure 22

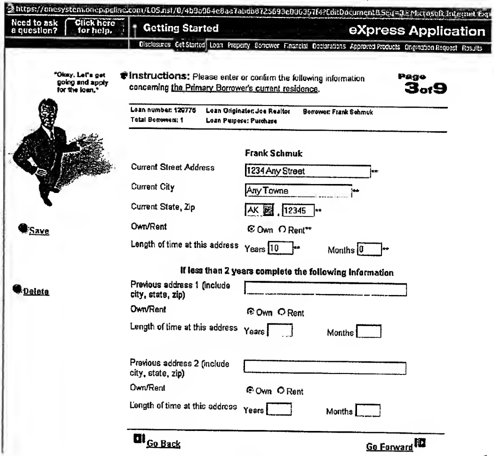
Need to ask a question?
Click here for help.
Getting Started
eXpress Application
Disclosures Get Started Loan Property Borrower Financial Declarations Approved Products Origination Request Results
"Okay. Let's get going and apply for the loan."
Instructions: Please enter or confirm the following information concerning the Primary Borrower's current residence.
Page 3 of 9
Loan number: 129776 Loan Originator: Joe Realtor Borrower: Frank Schmuk
Total Borrowers: 1 Loan Purpose: Purchase
Frank Schmuk
Current Street Address 1234 Any Street **
Current City Any Towne **
Current State, Zip AK 12345 **
Own/Rent Own Rent**
Length of time at this address Years 10 ** Months 0 **
If less than 2 years complete the following information
Previous address 1 (include city, state, zip)
Own/Rent Own Rent
Length of time at this address Years Months
Previous address 2 (include city, state, zip)
Own/Rent Own Rent
Length of time at this address Years Months
Save
Delete
Go Back
Go Forward

Figure 23

A.

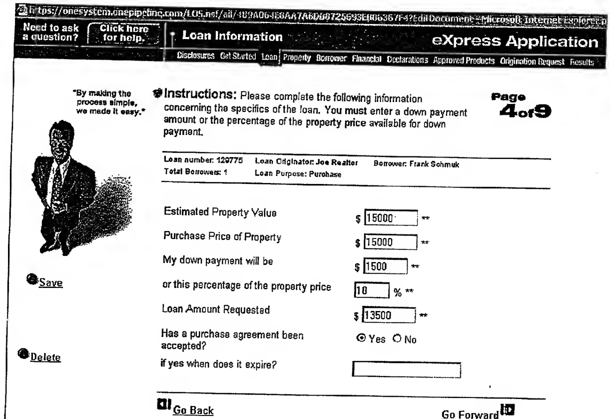
https://onesystem.onepipeline.com/LOS.nsf/all/...?EditDocument - Microsoft Internet Explorer
Need to ask a question?
Click here for help.
Loan Information
eXpress Application
Disclosures Get Started Loan Property Borrower Financial Declarations Approved Products Origination Request Results
"By making the process simple, we made it easy."
Instructions: Please complete the following information concerning the specifics of the loan. You must enter a down payment amount or the percentage of the property price available for down payment.
Page 4 of 9
Loan number: 129775 Loan Originator: Joe Realtor Borrower: Frank Schmuk
Total Borrowers: 1 Loan Purpose: Purchase
Estimated Property Value $ 15000 **
Purchase Price of Property $ 15000 **
My down payment will be $ 1500 **
or this percentage of the property price 10 % **
Loan Amount Requested $ 13500 **
Has a purchase agreement been accepted? Yes No
if yes when does it expire?
Save
Delete
Go Back
Go Forward

Figure 24

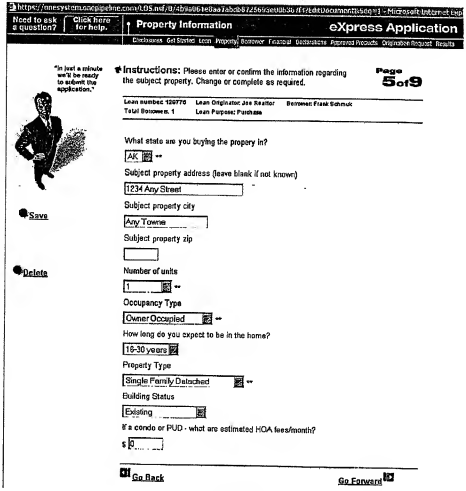
Need to ask a question?
Click here for help.
Property Information
eXpress Application
Disclosures Get Started Loan Property Borrower Financial Declarations Required Records Originator Request Results
"In just a minute we'll be ready to submit the application."
Instructions: Please enter or confirm the information regarding the subject property. Change or complete as required.
Page 5 of 9
Loan number: 120770
Loan Originator: Joe Realtor
Borrower: Frank Schmuck
Total Borrowers: 1
Loan Purpose: Purchase
What state are you buying the property in?
AK
Subject property address (leave blank if not known)
1234 Any Street
Subject property city
Any Towne
Subject property zip
Save
Delete
Number of units
1
Occupancy Type
Owner Occupied
How long do you expect to be in the home?
16-30 years
Property Type
Single Family Detached
Building Status
Existing
If a condo or PUD - what are estimated HOA fees/month?
$ 0
Go Back
Go Forward

Figure 25

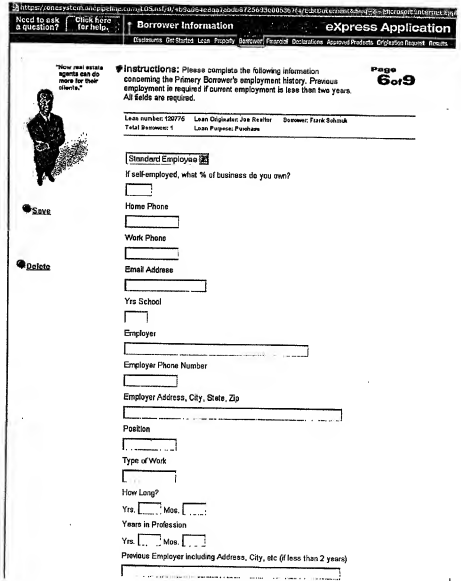
Need to ask a question?
Click here for help.
Borrower Information
eXpress Application
Disclosures Get Started Loan Property Borrower Financial Declarations Approved Products Origination Request Results
"How real estate agents can do more for their clients."
Instructions: Please complete the following information concerning the Primary Borrower's employment history. Previous employment is required if current employment is less than two years. All fields are required.
Page 6 of 9
Loan number: 130776
Loan Originator: Joe Realtor
Borrower: Frank Schmuck
Total Borrowers: 1
Loan Purpose: Purchase
Standard Employee
If self-employed, what % of business do you own?
Save
Home Phone
Work Phone
Delete
Email Address
Yrs School
Employer
Employer Phone Number
Employer Address, City, State, Zip
Position
Type of Work
How Long?
Yrs.
Mos.
Years in Profession
Yrs.
Mos.
Previous Employer including Address, City, etc (if less than 2 years)

Figure 26

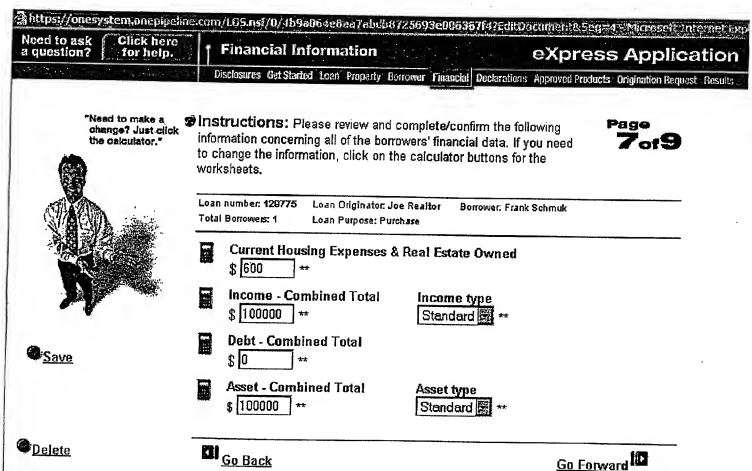
https://onesystem.onepipeline.com/LOS.nsf/0/4b9a064e8aa7ebdb8725693e005367f42EditDocument&Seq=4 - Microsoft Internet Exp
Need to ask a question? Click here for help.
Financial Information
eXpress Application
Disclosures Get Started Loan Property Borrower Financial Declarations Approved Products Origination Request Results
"Need to make a change? Just click the calculator."
Instructions: Please review and complete/confirm the following information concerning all of the borrowers' financial data. If you need to change the information, click on the calculator buttons for the worksheets.
Page 7 of 9
Loan number: 128775 Loan Originator: Joe Realtor Borrower: Frank Schmuk
Total Borrowers: 1 Loan Purpose: Purchase
Current Housing Expenses & Real Estate Owned
$ 600 **
Income - Combined Total
$ 100000 **
Income type
Standard **
Debt - Combined Total
$ 0 **
Asset - Combined Total
$ 100000 **
Asset type
Standard **
Save
Delete
Go Back
Go Forward

Figure 27

A.

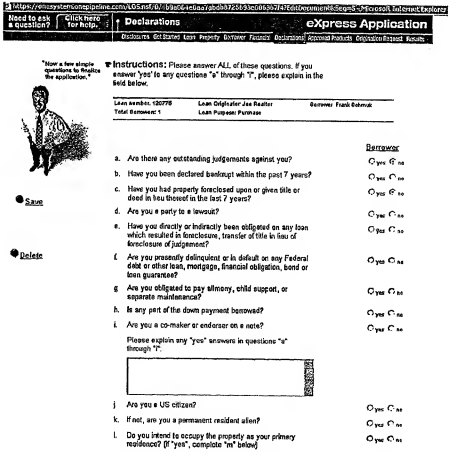
Need to ask a question?
Click here for help.
Declarations
eXpress Application
Disclosures GI/States Loan Property Borrower Assets Declarations Personal Products Origination Request Results
"Now a few simple questions to finalize the application."
Instructions: Please answer ALL of these questions. If you answer 'yes' to any question "a" through "i", please explain in the field below.
Loan number: 120776
Loan Originator: Joe Realtor
Borrower: Frank Bohmuk
Total Borrowers: 1
Loan Purpose: Purchase
Borrower
a. Are there any outstanding judgements against you?
b. Have you been declared bankrupt within the past 7 years?
c. Have you had property foreclosed upon or given title or deed in lieu thereof in the last 7 years?
d. Are you a party to a lawsuit?
e. Have you directly or indirectly been obligated on any loan which resulted in foreclosure, transfer of title in lieu of foreclosure or judgement?
f. Are you presently delinquent or in default on any Federal debt or other loan, mortgage, financial obligation, bond or loan guarantee?
g. Are you obligated to pay alimony, child support, or separate maintenance?
h. Is any part of the down payment borrowed?
i. Are you a co-maker or endorser on a note?
Please explain any "yes" answers in questions "a" through "i".
j. Are you a US citizen?
k. If not, are you a permanent resident alien?
l. Do you intend to occupy the property as your primary residence? (If "yes", complete "m" below)
m. Have you had ownership interest in property in the last three years?
(1) What type of property did you own?
Property 1
Property 2
Property 3
(2) How do you hold title to the home?
Property 1
Save
Delete

Figure 28

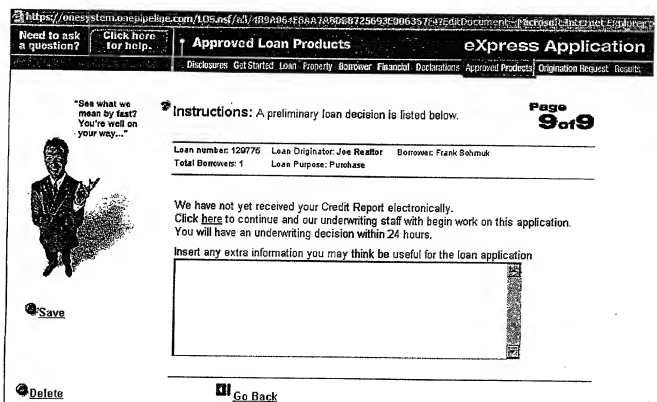
https://onesystem.onepipeline.com/LOS.nsf/a1/4B9A064F8AA7A6D6B725693E006357F4?OpenDocument - Microsoft Internet Explorer
Need to ask a question?
Click here for help.
Approved Loan Products
eXpress Application
Disclosures Get Started Loan Property Borrower Financial Declarations Approved Products Origination Request Results
"See what we mean by fast? You're well on your way..."
Instructions: A preliminary loan decision is listed below.
Page 9 of 9
Loan number: 129776 Loan Originator: Joe Realtor Borrower: Frank Sohmuk
Total Borrowers: 1 Loan Purpose: Purchase
We have not yet received your Credit Report electronically.
Click here to continue and our underwriting staff with begin work on this application.
You will have an underwriting decision within 24 hours.
Insert any extra information you may think be useful for the loan application
Save
Delete
Go Back

Figure 29

A.

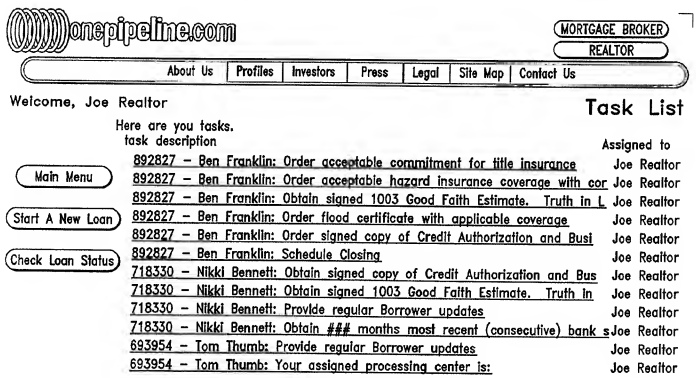
onepipeline.com
MORTGAGE BROKER
REALTOR
About Us
Profiles
Investors
Press
Legal
Site Map
Contact Us
Welcome, Joe Realtor
Task List
Here are you tasks.
task description
Assigned to
Main Menu
Start A New Loan
Check Loan Status
892827 – Ben Franklin: Order acceptable commitment for title insurance Joe Realtor
892827 – Ben Franklin: Order acceptable hazard insurance coverage with cor Joe Realtor
892827 – Ben Franklin: Obtain signed 1003 Good Faith Estimate. Truth in L Joe Realtor
892827 – Ben Franklin: Order flood certificate with applicable coverage Joe Realtor
892827 – Ben Franklin: Order signed copy of Credit Authorization and Busi Joe Realtor
892827 – Ben Franklin: Schedule Closing Joe Realtor
718330 – Nikki Bennett: Obtain signed copy of Credit Authorization and Bus Joe Realtor
718330 – Nikki Bennett: Obtain signed 1003 Good Faith Estimate. Truth In Joe Realtor
718330 – Nikki Bennett: Provide regular Borrower updates Joe Realtor
718330 – Nikki Bennett: Obtain ### months most recent (consecutive) bank s Joe Realtor
693954 – Tom Thumb: Provide regular Borrower updates Joe Realtor
693954 – Tom Thumb: Your assigned processing center is: Joe Realtor
privacy policy

Figure 30

A.

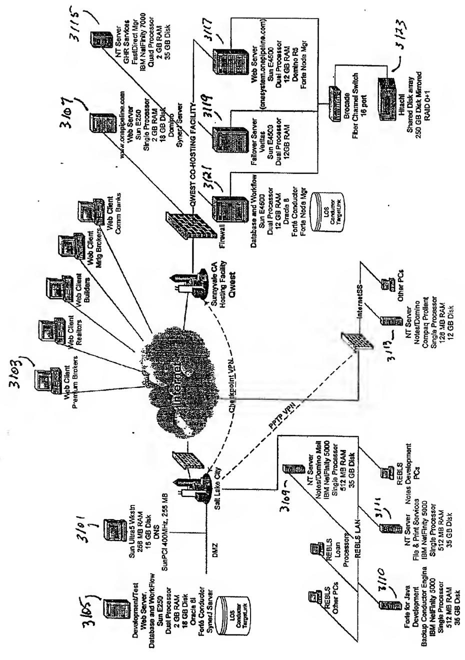
3115
NT Server
GHR Services
FastDirect Mgr
IBM NetFinity 7000
Quad Processor
2 GB RAM
35 GB Disk
3107
www.onepipeline.com
Web Server
Sun E250
Single Processor
2 GB RAM
18 GB Disk
Domino
SynerJ Server
3117
Web Server
(onesystem.onepipeline.com)
Sun E4500
Dual Processor
12 GB RAM
Domino R5
Forte Node Mgr
QWEST CO-HOSTING FACILITY
3119
Failover Server
Veritas
Sun E4500
Dual Processor
12GB RAM
3121
Database and Workflow
Sun E4500
Dual Processor
12 GB RAM
Oracle 8
Forté Conductor
Forte Node Mgr
LOS
Conductor
TargetLink
Brocade
Fiber Channel Switch
16 port
3123
Hitachi
Shared Disk array
250 GB Disk Mirrored
RAID 0+1
Firewall
Web Client
Comm Banks
Web Client
Mrtg Brokers
Web Client
Builders
Web Client
Realtors
3103
Web Client
Premium Brokers
Internet
Sunnyvale CA
Hosting Facility
Qwest
InternetSS
Other PCs
3113
NT Server
Notes/Domino
Compaq Proliant
Single Processor
128 MB RAM
12 GB Disk
Checkpoint VPN
PPTP VPN
3105
Development/Test
Web Server,
Database and WorkFlow
Sun E250
Dual Processor
2 GB RAM
18 GB Disk
Oracle 8i
Forté Conductor
SynerJ Server
LOS
Conductor
TargetLink
3101
Sun Ultra5 Wkstn
256 MB RAM
15 GB Disk
DNS
SunPCI 400MHz, 256 MB
DMZ
Salt Lake City
3109
NT Server
Notes/Domino Mail
IBM NetFinity 5000
Single Processor
512 MB RAM
35 GB Disk
REBLS
Notes Development
PCs
REBLS LAN
REBLS
Loan
Processors
REBLS
Other PCs
3111
NT Server
File & Print Services
IBM NetFinity 5000
Single Processor
512 MB RAM
35 GB Disk
3110
Forte for Java
Development
Backup Conductor Engine
IBM NetFinity 5000
Single Processor
512 MB RAM
36 GB Disk

Figure 31

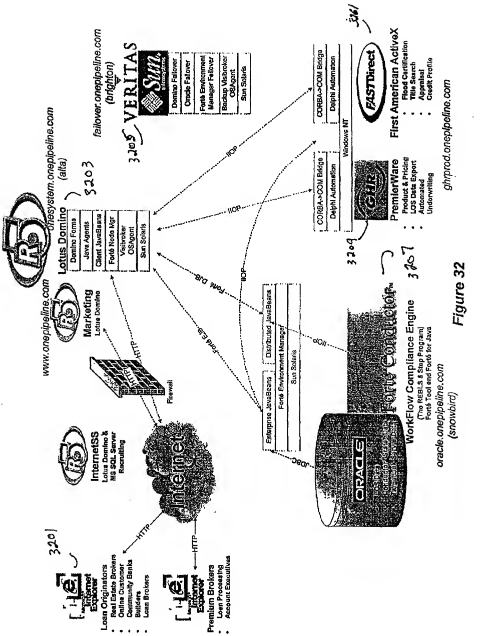
3201
Internet Explorer
Loan Originators
Real Estate Brokers
Online Customer
Community Banks
Builders
Loan Brokers
HTTP
Internet Explorer
Premium Brokers
Loan Processing
Account Executives
HTTP
Internet
InternetSS
Lotus Domino & MS SQL Server
Recruiting
Firewall
HTTP
HTTP
www.onepipeline.com
Marketing
Lotus Domino
Lotus Domino
Domino Forms
Java Agents
Client JavaBeans
Forté Node Mgr
Visibroker
OSAgent
Sun Solaris
onesystem.onepipeline.com
(alta)
3203
failover.onepipeline.com
(brighton)
3205
VERITAS
Domino Failover
Oracle Failover
Forté Environment Manager Failover
Backup Visibroker OSAgent
Sun Solaris
IIOP
IIOP
IIOP
Forté D/B
Forté EJB
IIOP
Enterprise JavaBeans
Distributed JavaBeans
Forté Environment Manager
Sun Solaris
JDBC
IIOP
ORACLE
Forté Conductor
3207
WorkFlow Compliance Engine
(The REBLS 5 Step Program)
Forté Tool and Forté for Java
oracle.onepipeline.com
(snowbird)
CORBA->COM Bridge
Delphi Automation
CORBA->COM Bridge
Delphi Automation
Windows NT
3209
GHR
PremierWare
Product & Pricing
LOS Data Export
Automated Underwriting
FASTDirect
3211
First American ActiveX
Flood Certification
Title Search
Appraisal
Credit Profile
ghrprod.onepipeline.com

Figure 32

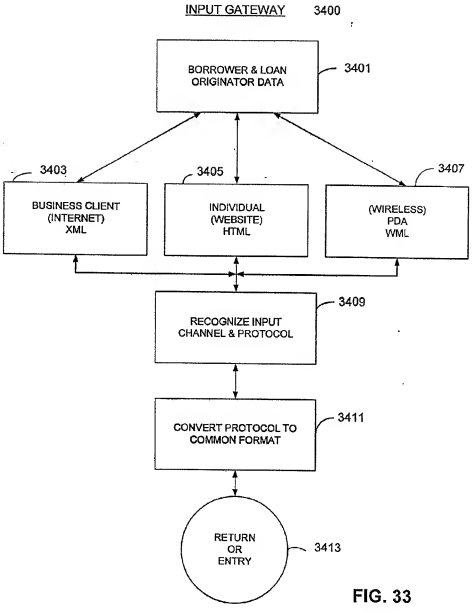
INPUT GATEWAY 3400
BORROWER & LOAN ORIGINATOR DATA
3401
3403
3405
3407
BUSINESS CLIENT (INTERNET) XML
INDIVIDUAL (WEBSITE) HTML
(WIRELESS) PDA WML
RECOGNIZE INPUT CHANNEL & PROTOCOL
3409
CONVERT PROTOCOL TO COMMON FORMAT
3411
RETURN OR ENTRY
3413

FIG. 33

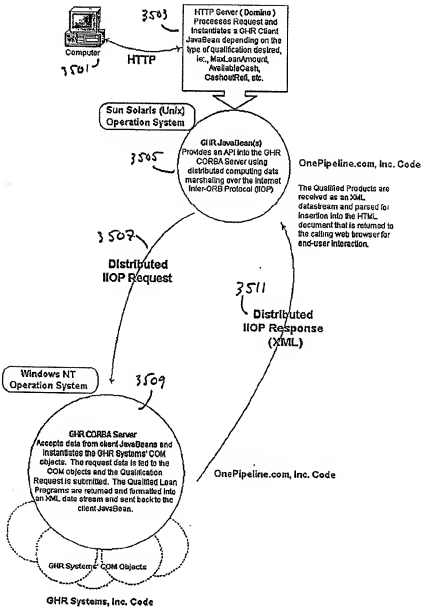
3503
HTTP Server (Domino)
Processes Request and
Instantiates a GHR Client
JavaBean depending on the
type of qualification desired,
ie., MaxLoanAmount,
AvailableCash,
CashoutRefi, etc.
Computer
HTTP
3501
Sun Solaris (Unix)
Operation System
GHR JavaBean(s)
Provides an API into the GHR
CORBA Server using
distributed computing data
marshalling over the Internet
Inter-ORB Protocol (IIOP)
3505
OnePipeline.com, Inc. Code
The Qualified Products are
received as an XML
datastream and parsed for
insertion into the HTML
document that is returned to
the calling web browser for
end-user interaction.
3507
Distributed
IIOP Request
3511
Distributed
IIOP Response
(XML)
Windows NT
Operation System
3509
GHR CORBA Server
Accepts data from client JavaBeans and
instantiates the GHR Systems' COM
objects. The request data is fed to the
COM objects and the Qualification
Request is submitted. The Qualified Loan
Programs are returned and formatted into
an XML data stream and sent back to the
client JavaBean.
OnePipeline.com, Inc. Code
GHR Systems' COM Objects
GHR Systems, Inc. Code

Figure 34

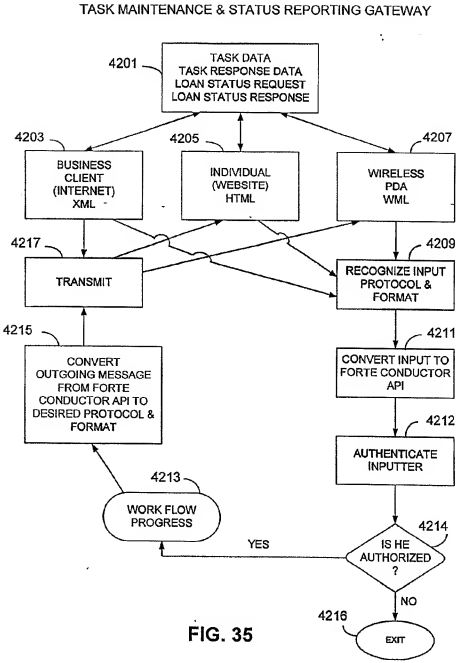
TASK MAINTENANCE & STATUS REPORTING GATEWAY
4201
TASK DATA
TASK RESPONSE DATA
LOAN STATUS REQUEST
LOAN STATUS RESPONSE
4203
BUSINESS CLIENT (INTERNET) XML
4205
INDIVIDUAL (WEBSITE) HTML
4207
WIRELESS PDA WML
4217
TRANSMIT
4209
RECOGNIZE INPUT PROTOCOL & FORMAT
4215
CONVERT OUTGOING MESSAGE FROM FORTE CONDUCTOR API TO DESIRED PROTOCOL & FORMAT
4211
CONVERT INPUT TO FORTE CONDUCTOR API
4212
AUTHENTICATE INPUTTER
4213
WORK FLOW PROGRESS
4214
IS HE AUTHORIZED ?
YES
NO
4216
EXIT

FIG. 35

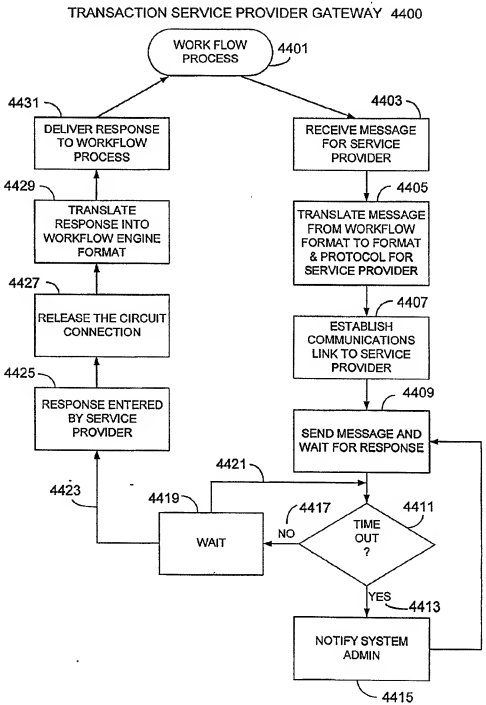
TRANSACTION SERVICE PROVIDER GATEWAY 4400
WORK FLOW PROCESS
4401
4431
DELIVER RESPONSE TO WORKFLOW PROCESS
4429
TRANSLATE RESPONSE INTO WORKFLOW ENGINE FORMAT
4427
RELEASE THE CIRCUIT CONNECTION
4425
RESPONSE ENTERED BY SERVICE PROVIDER
4403
RECEIVE MESSAGE FOR SERVICE PROVIDER
4405
TRANSLATE MESSAGE FROM WORKFLOW FORMAT TO FORMAT & PROTOCOL FOR SERVICE PROVIDER
4407
ESTABLISH COMMUNICATIONS LINK TO SERVICE PROVIDER
4409
SEND MESSAGE AND WAIT FOR RESPONSE
4421
4423
4419
WAIT
4417
NO
4411
TIME OUT ?
YES
4413
NOTIFY SYSTEM ADMIN
4415

FIG. 36

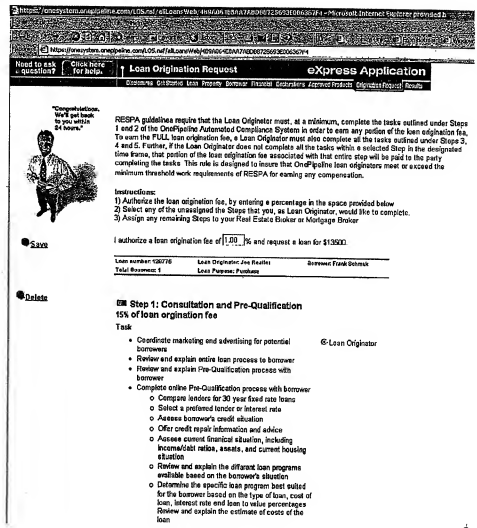
Need to ask a question?
Click here for help.
Loan Origination Request
eXpress Application
Guidelines
Borrower
Loan Property
Financial
Disclosures
Approved Products
Originator Request
Results
"Congratulations. We'll get back to you within 24 hours."
RESPA guidelines require that the Loan Originator must, at a minimum, complete the tasks outlined under Steps 1 and 2 of the OnePipeline Automated Compliance System in order to earn any portion of the loan origination fee. To earn the FULL loan origination fee, a Loan Originator must also complete all the tasks outlined under Steps 3, 4 and 5. Further, if the Loan Originator does not complete all the tasks within a selected Step in the designated time frame, that portion of the loan origination fee associated with that entire step will be paid to the party completing the tasks. This rule is designed to insure that OnePipeline loan originators meet or exceed the minimum threshold work requirements of RESPA for earning any compensation.
Instructions:
1) Authorize the loan origination fee, by entering a percentage in the space provided below
2) Select any of the unassigned the Steps that you, as Loan Originator, would like to complete.
3) Assign any remaining Steps to your Real Estate Broker or Mortgage Broker
Save
I authorize a loan origination fee of 1.00 % and request a loan for $135000.
Loan number: 130776
Loan Originator: Joe Realtor
Borrower: Frank Debtmuk
Total Borrower: 1
Loan Purpose: Purchase
Delete
Step 1: Consultation and Pre-Qualification
15% of loan origination fee
Task
Coordinate marketing and advertising for potential borrowers
E-Loan Originator
Review and explain entire loan process to borrower
Review and explain Pre-Qualification process with borrower
Complete online Pre-Qualification process with borrower
Compare lenders for 30 year fixed rate loans
Select a preferred lender or interest rate
Assess borrower's credit situation
Offer credit repair information and advice
Assess current financial situation, including income/debt ratios, assets, and current housing situation
Review and explain the different loan programs available based on the borrower's situation
Determine the specific loan program best suited for the borrower based on the type of loan, cost of loan, interest rate and loan to value percentages
Review and explain the estimate of costs of the loan

Figure 37

A.

Step 2: Loan Application
20% of loan orgination fee

Task — Loan Originator

- Collect basic financial information from borrower
- Review and explain the Authorization to Verify Information to the borrower
- Have the borrower sign the Authorization to Verify Information
- Review and explain the Business Disclosure Statement to the borrower
- Have the borrower sign the Business Disclosure Statement
- Complete the online Loan Application
  - Estimate property value of new property purchase
  - Determine down payment and loan to value for the new property purchase
  - Review new property purchase information and status
  - Review and correct current financial situation from Pre-Qualification
  - Collect borrower information including declarations
- Determine loan origination fee
- Select any of the unassigned Steps that you, as the loan originator, want to complete. Assign remaining Steps to your Real Estate Broker or Mortgage Broker as appropriate.
- Schedule closing with borrower
- Order Title Report
- Order Appraisal

Figure 38

A.

Step 3: Loan Review and Administrative Tasks
15% of loan orgination fee

Task

- Provide quality control for and file/store copies of Authorization to Verify Form, Business Disclosure Form, Good Faith Estimate, Truth In Lending Statement and other disclosures
- Review loan file for accuracy with the borrower
- Review and explain underwriting process and conditions with borrower
  - Review and explain underwriting process with borrower
  - Review and explain the financial information needed from the borrower
  - Review and explain the reason for the homeowner's insurance Binder with the borrower
  - Review and explain the reason for Title Report to the borrower
  - Review and explain the reason for the Appraisal to the borrower
  - Review and explain the reason for Flood Certification to the borrower
  - Review and explain the reason for the Survey (as required)
- Review of the underwriting conditions
- Submit file for underwriting approval

(•) Loan Originator
( ) Real Estate Broker
( ) Mortgage Processing Center

Figure 39

Step 4: Borrower Updates and Loan Processing
35% of loan orgination fee

Task

- Review and explain underwriting decision with borrower
- Review and explain other closing conditions to the borrower
  - Review and explain the Good Faith Estimate with borrower
  - Review and explain the Truth in Lending statement with borrower
  - Review and explain other federal and state disclosures with borrower
- Get borrower's signature on documents
- Collect the mandatory conditions from the borrower
  - Collect the income information (paystubs, W2 and tax records as required)
  - Collect the bank statements from the borrower
  - Collect the Insurance Binder information
- Forward all conditions to processing
- Review and explain the results of the Title Report
- Review and explain the results of the Appraisal
- Review and explain the results of the Flood Certification
- Provide regular status updates to the borrower
- Order the Flood Certification
- Order the Survey (as required)

(●) Loan Originator
( ) Real Estate Broker
( ) Mortgage Processing Center

Step 5: Closing
15% of loan orgination fee

Task

- Review and authorize the Clear to Close document from processing
- Lock the interest rate for the loan
- Coordinate closing with borrower and title company.
- Attend closing

(●) Loan Originator
( ) Real Estate Broker
( ) Mortgage Processing Center

Go Back Go Forward

Figure 40

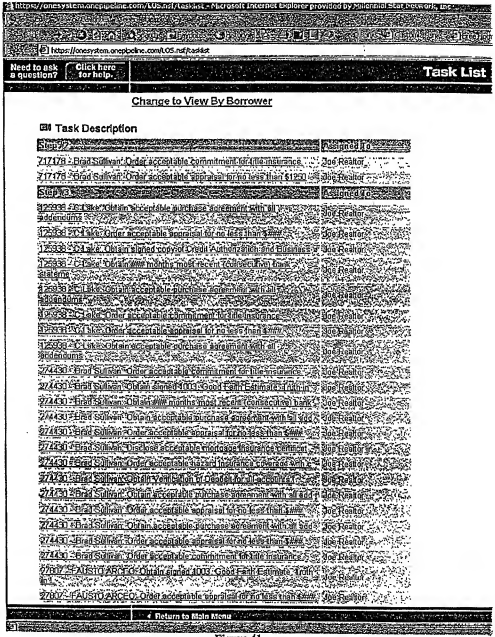
https://onesystem.oneipeline.com/IOS.nsf/tasklist - Microsoft Internet Explorer provided by Financial Star Network, Inc.
https://onesystem.oneipeline.com/IOS.nsf/tasklist
Need to ask a question? Click here for help.
Task List
Change to View By Borrower
Task Description
Assigned To
Return to Main Menu

Figure 41

INTERFACE SYSTEM FOR A MORTGAGE LOAN ORIGINATOR COMPLIANCE ENGINE

RELATED APPLICATIONS

[0001] This application is a continuation-in-part to non-provisional co-pending application Ser. No. 09/645,217 Filed Aug. 24, 2000, titled "Method and Apparatus for a Mortgage Loan Originator compliance Engine." This application is filed in accordance with 37 CFR § 1.53 (b)(2) and is also related to the following co-pending non-provisional utility applications:

[0002] Ser. No. 09/645,799 filed Aug. 24, 2000, titled "Method and Apparatus for a Mortgage Loan Management System."

[0003] Ser. No. 09/645,775 Filed Aug. 24, 2000, titled "Method and Apparatus for a Mortgage Loan Origination Gateway";

[0004] Ser. No. 09/645,796 Filed Aug. 24, 2000, titled "Method and Apparatus for Verification of a Qualified Mortgage Loan Originator";

[0005] Ser. No. 09/645,800 Filed Aug. 24, 2000, titled "Method and Apparatus for a Mortgage Loan Task Flow Process";

[0006] Ser. No. 09/645,798 Filed Aug. 24, 2000, titled "Method and Apparatus for a Mortgage Loan Process Interaction Gateway";

[0007] Ser. No. 09/645,801 Filed Aug. 24, 2000, titled "Method and Apparatus for a Mortgage Loan Transaction Service Provider Gateway"; and

[0008] Ser. No. _____ filed Feb. 13, 2001, titled "Method and Apparatus for an Advanced Speech Recognition Portal for a Mortgage Loan Management System."

COPYRIGHT NOTICE

TECHNICAL FIELD

[0010] The present invention relates to the general field of computers, telecommunications, and computer and Internet related systems. More specifically the invention relates to systems and processes to be used in the mortgage industry for combining a customer Loan Application System with an automated Compliance Engine used for generating and monitoring a set of required procedures involved in moving and tracking a mortgage loan through one or more of the steps of 'originate', 'approve', 'close', 'fund', and 'ship'.

BACKGROUND

[0011] Bank and other lending companies in the mortgage loan industry have developed automated loan application processing systems to make the loan application process more efficient and more centrally controlled. Such systems are typically programmed to generate some of the tasks associated with a mortgage loan application such as requesting an appraisal, evaluating the loan contract and application data, authorizing a loan, tracking the closing activities and completing the financial disposition of the loan. Such systems generally contain no regulatory oversight or control of the tasks performed. Such oversight and control is assumed.

[0012] There is a need for an automated system for managing the processing of mortgage loan applications, wherein the identification of the loan originator, his/her location and the location of the property which is the subject of the loan, determine the Federal and State mortgage loan laws and regulations as well as the professional guidelines which govern the loan transaction, and wherein the automated system uses the specific loan regulations to determine the tasks required to complete a loan transaction, including tasks required by applicable federal or state law, provide the set of required tasks to lenders and other interested parties, record the completion of the set of tasks, and if requested by a leader, to use the set of tasks interually to drive the flow of the automated mortgage loan process to completion. Furthermore there is a need for such a regulatory compliance system which can easily be coupled to existing loan application processing systems.

[0013] The Federal laws and regulations in question are basically those outlined in the Real Estate Settlement Procedures Act (RESPA) and the Federal Housing and Urban Development's (HUD's) implementing Regulation X. The State regulations in question are those State specific regulations and implementing instructions that serve a similar purpose, relating to Lender payments to Mortgage Brokers and other settlement service providers. RESPA is the federal law implemented by HUD's Regulation X, to protect home buyers from excess costs and confusion when securing a home mortgage loan. Among other federal laws, the Truth in Lending Act ("TILA") and the Equal Credit Opportunity Act ("ECOA") impact the mortgage loan process. Under the TILA, certain credit related disclosures are required to be made to the borrower prior to the consummation of a mortgage loan transaction, so that the borrower understands the total cost of the loan.

[0014] The ECOA, and its implementing regulation, Regulation B, were enacted and promulgated to require that lenders make credit equally available to all creditworthy borrowers without regard to race, color, religion, national origin, sex, marital status, age, receipt of public assistance or the fact that the borrower in good faith exercised any right under the Federal Consumer Credit Protection Act. In addition to the prohibition against discrimination, the ECOA and Regulation B also contain, among others, requirements regarding the provision of appraisal reports, evaluation of applications, spousal signatures, and the provision of adverse action notices.

[0015] Regarding state laws, most jurisdictions have enacted licensing statutes that may require real estate sales professionals, builders, financial institutions/lenders and mortgage brokers to obtain a license and satisfy various other financial, educational and operational requirements. Most jurisdictions also have enacted laws that impose, among others, requirements regarding the types of fees that may be charged to a consumer in connection with a mortgage loan transaction and the persons entitled to receive

such fees, as well as certain jurisdiction-specific disclosures that must be provided to the consumer.

[0016] There is a need for a system to facilitate the application of all of these laws and regulations ("regulations") in an efficient and systematic manner during the course of a mortgage loan transaction by using the telecommunications and computing facilities available to the market today.

[0017] While some state laws are more restrictive, RESPA allows a licensed real estate professional to receive compensation for originating a mortgage loan only if that real estate professional provides goods or facilities or performs services that are necessary for the origination of the loan and that are separate and distinct from any services the real estate professional provides incident to the sale of the property that secures the mortgage loan. Moreover the mortgage loan process is labor intensive, error prone and time consuming for all parties concerned, making it difficult for a real estate professional to track the services he or she provided to satisfy RESPA and state requirements to justify receiving compensation.

[0018] The demand for fairness and equity, as well as an increasingly competitive lending environment, was the reason why RESPA was passed and now requires a greater level of sophistication on the part of the lending community. Furthermore as indicated above, increasing oversight on the part of governments and regulatory agencies have required increased levels of sophistication in the traditional borrower-lender relationship. While these oversight demands are generally considered to be a benefit to the borrower-lender relationship, it is, nonetheless a burden to all parties, and significant increases in both time and cost are accrued to the process. As well, protective regulations added by the lending community under whose umbrella the industry operates, further protract the process of 'doing business'. These regulations and 'rules' governing the mortgage process permit those in the loan origination role to receive a fee for services rendered when the applicable rules are followed, as well as penalties and loss of fees for non-compliance. For example, RESPA has criminal penalties wherein a violator can go to jail for up to a year.

[0019] In the past, attempts have been made to automate some parts of the mortgage loan process. For example, U.S. Pat. No. 5,995,947 issued Nov. 30. 1999 to IMX Mortgage Exchange titled "Interactive Mortgage and loan information and real-time trading system" provides a system and method for trading loans wherein a transaction server maintains a database of pending loan applications and their statuses, and wherein each party to the loan (broker, lender) can search and modify the database consistent with their role in the transaction. However this system focuses on only one facet of the loan process itself. Other parts of the loan process are addressed in U.S. Pat. No. 5,966,700 issued Oct. 12, 1999 to Federal Home Loan Bank of Chicago, titled "Management System for Risk Sharing of Mortgage Pools" is a system wherein a mortgage originator (bank, savings & loan, etc.) and a funding institution (Federal Home Loan Bank, etc.) agree to assume certain risks for the mortgage by entering into a credit agreement having an overall credit enhancement value, and wherein the system calculates and records the allocation of mortgage interest and credit risk between them. This system functions after a mortgage has been issued which is outside of applicants' present system. Another recently issued patent related to mortgage loans is U.S. Pat. No. 5,991,745 issued Nov. 23, 1999 to Fannie Mae, titled "Reverse Mortgage Loan Calculation System and Process", which is a payment calculation system related to loans that the borrower is generally not required to repay until the security property is sold. Still another is U.S. Pat. No. 5,940,812 issued Aug. 17, 1999 to LoanMarket Resources, LLC titled "Apparatus & Method for Automatically Matching a Best Available Loan to a Potential Borrower via Global Telecommunications Network" teaches a system for matching loan requests (and related credit data) to lenders (with related eligibility criteria) in order to facilitate such loans whether they be for automobile purchases or whatever. Similarly, other U.S. Patents teach methods for real time loan approval (U.S. Pat. No. 5,870, 721), methods for Lender direct credit evaluation and loan processing (U.S. Pat. Nos. 6,029,149; 5,930,776; and 5,611, 052); and methods for keeping track of loans, loan histories, leases and pertinent data related thereto (U.S. Pat. No: 4,774,664).

[0020] Inherent in most property transactions, especially those involving a mortgage, are other elements which, as suggested before, serve to protect the interests of all concerned parties, but which unnecessarily protract the underwriting process. These generally include at least the following: a processing procedure and fee to originate the loan application, a title search to discover any encumbrances on the property such as liens, overdue taxes, etc., a credit check on the borrower of record to determine the credit-worthiness of the individual, a verification of employment which speaks to the individual's ability to repay the loau, a property survey, where such is dictated by local laws, an appraisal to determine if the property value secures the lender's investment, application for various insurances such as flood, earthquake, or other insurance as local law and custom requires, the loan application itself, and other such applications, searches, and discoveries, as local laws dictate. In addition to the aforementioned, an income to debt ratio is established to help select the most appropriate loan program(s) consistent with the lender's policy and the borrower's requirements. As indicated above, many lenders have implemeuted automated Loau application processing systems which attempt to keep track of some or all of these steps.

[0021] Of equal importance in the process is the distribution of service fees and commissions associated with real estate mortgage transactions. The timeliness and accuracy of transactions can adversely affect the payment of various agents or workers involved in the process. Furthermore, because of the almost casual connection between the parties to the transaction, coupled with heretofore rigid definitions of each worker's responsibility, creative solutions to the aforementioned problems were not forthcoming, and little could be done to remedy these problems. Personal intervention on the part of agents or other workers could help, but weren't part of the scope of the transaction, were unreliable, and were differentially applied, often in consideration of such elements as the wealth or prestige of the borrower, the value of the property, personal friendships, or other less tangible factors.

[0022] Many of the agents or workers participating in the transaction bear a limited portion of the responsibility for the

transaction. Employment verification, title searches, and the like, are often of fixed duration and required effort with mortgages falling within a broad value range. As such, these workers enjoy a steady, regulated income flow. It falls however, to the real estate agent to invest time on an open-ended basis to accomplish a sale. In this instance, the commission is often fixed by industry convention or statute, and the Real estate sales professional typically doesn't enjoy the benefit of serving as both listing and buying agent, which might net a full commission. More typically, the agent must make a 50/50 split with another agent or agency. Adding injury to this significant commission reduction is the typical requirement that the remaining commission balance be split, usually 60/40, with the Real estate sales professional's parent agency. It is common for a Real estate sales professional, having invested many hours over a period or weeks or months, to realize a modest 1-2% of the selling price of the property. Given this scenario, it is expected that a Real estate sales professional will focus on opportunities which will bear fruit faster, and leave the longer-term prospects alone, even though they have a similar reward and are of equal value in the eyes of the respective buyers and sellers.

[0023] The current state of the art simply does not provide a means whereby the real estate sales professional, or any other agent or worker, may participate in the other portions of the monetary flow, beyond that which is historically common to their respective industries.

[0024] While there are a number of developing systems, as mentioned above, for automated lender selection and loan tracking, it is clear that a need exists for an automated system based upon a database of federal, state and local rules and regulations, which can be used to identify, for a given loan transaction, the set of tasks required to process and complete the loan transaction, including tasks required by applicably federal or state law, and to track the set of tasks during the process itself to reasonably assure that compliance with these rules and regulations can be reported, or alternatively, that compliance task completion may be traced to the entity reporting completion. There is a further need to automatically attach the regulatory compliance information with a task management system required to process loans and to provide methods for integrating the Compliance Engine technology with any third party loan application processing software.

SUMMARY OF THE INVENTION

[0025] The present invention provides a solution to the needs described above through a system and process to be used in the mortgage industry for combining a lender's Loan Application System with an automated Compliance Engine used for generating and monitoring a set of required procedures involved in moving and tracking a mortgage loan through one or more of the steps of 'originate', 'approve', 'close', 'fund', and 'ship'. The automated compliance engine itself is a system and method for automatically generating a set of required tasks for use in managing the mortgage loan process, including tasks required by applicably federal or state law. The system of the present invention automatically couples the regulatory compliance information engine and a task management system required to process loans and provides methods for integrating the Automate Compliance Engine technology with any third party's loan processing software.

[0026] The automated system of the present invention uses the Federal, State, local and professional regulations and requirements and implementing instructions to generate a plurality of tasks which can be used to control and drive the process of handling a mortgage loan application to completion and settlement in accordance with these regulations. Mortgage loan requestors may specify that the system will generate the plurality of required tasks, including tasks required by applicably federal or state law, provide the plurality of required tasks to the requester for his execution, including tasks required by applicably federal or state law, and monitor the completion of all required tasks so as to provide a completion certificate to the requestor. Alternatively, mortgage loan requestors may specify that the automated system will generate the plurality of required tasks, including tasks required by applicably federal or state law, will manage and control the execution of the required tasks, and monitor the completion of all required tasks so as to provide a completion certificate to the requestor.

[0027] The invention allows loan originators to enter loan applications and comprises a platform to allow other entities to underwrite the loan (that is, this invention is not a loan approval system, but can use any lender's loan approval system) but which provides the means to control and drive the mortgage transaction to closing by means of a compliance system which contains a rules engine built around the required Federal and State regulations and which tracks and records every step in the process to provide a record of completion for Federal and State regulators. The invention was designed to provide mechanisms for use to assure that loan originators meet and exceed federal, state, local and professional laws governing the relations between real estate sales and mortgage lending activities.

[0028] A computer implemented method is disclosed for facilitating processing of a mortgage loan application wherein the system receives a request to process a mortgage loan from a third party loan processing system; generates a plurality of tasks, the tasks comprising actions required to process the mortgage loan, and including tasks required by applicable federal and/or state law; and distributes one or more of the required tasks to the third party loan processing system for execution of the tasks. The method further provides an act of monitoring the completion of the plurality of tasks whereby a report of completion of all required tasks can be generated.

[0029] An apparatus is disclosed for automated processing of mortgage loans which has a compliance engine with communications devices for receiving a request to process a mortgage loan from a client loan processing system; the compliance engine having logic devices programmed to generate a plurality of tasks required to process the loan, wherein the tasks are made up of actions which are required for a specific mortgage loan by various legal rules and regulations; and wherein the compliance engine has logic devices programmed to distribute the plurality of tasks to the client loan processing system.

[0030] Also disclosed is a server node in a network which is responsive to a request to process a loan from a third party loan processing system by generating a plurality of tasks which are required to process the requested loan, including tasks required by applicably federal or state law, and for distributing the plurality of tasks to persons who are quali-

fied to perform the tasks. Also disclosed are mechanisms in the server node for monitoring the completion of the plurality of tasks related to a given loan and for generating reports and completion certificates associated with the actions related to the given loan.

[0031] Also, a computer program stored on a computer readable medium or carrier wave is disclosed having computer code mechanisms for receiving a loan request from a client loan processing system; for generating a plurality of tasks required to process the loan, including tasks required by applicably federal or state law, and distributing the plurality of tasks to the client loan processing system for execution. Additional code mechanisms are disclosed which monitor the completion of the plurality of tasks and when all tasks are completed can issue various reports and completion certificates.

[0032] Still other embodiments of the present invention will become apparent to those skilled in the art from the following detailed description, wherein is shown and described only the embodiments of the invention by way of illustration of the best modes contemplated for carrying out the invention. As will be realized, the invention is capable of modification in various obvious aspects, all without departing from the spirit and scope of the present invention. Accordingly, the drawings and detailed description are to be regarded as illustrative in nature and not restrictive.

DESCRIPTION OF THE DRAWINGS

[0033] The features and advantages of the system and method of the present invention will be apparent from the following description in which:

[0034] **FIG. 1** illustrates a typical configuration of Internet connected systems representative of the preferred embodiment of the present invention.

[0035] **FIG. 2** illustrates a typical general purpose computer system of the type representative of the preferred embodiment.

[0036] **FIG. 3** illustrates the business model which encompasses the present invention.

[0037] **FIGS. 4A & 4B** illustrate a functional flow chart of a preferred embodiment of the system.

[0038] **FIG. 4C** illustrates a configuration of an embodiment of the system which contains the invention.

[0039] **FIG. 4D** illustrates exemplary functions of the Compliance Engine.

[0040] **FIG. 5** illustrates a configuration of an alternative embodiment of the system which contains the invention.

[0041] **FIG. 6** is a flow chart depicting the process Map and Workflow Definition for a New Loan.

[0042] FIGS. **7-30** illustrate exemplary screenshots for the system embodying the present invention.

[0043] **FIG. 31** illustrates an exemplary Internet configuration showing the hardware and software systems used in an embodiment at this time.

[0044] **FIG. 32** illustrates another exemplary Internet configuration showing the hardware and software systems used in an embodiment at this time.

[0045] **FIG. 33** illustrates an exemplary embodiment of the Input gateway module.

[0046] **FIG. 34** illustrates an exemplary relationship of various system elements with the GHR sub-system.

[0047] **FIG. 35** illustrates an exemplary embodiment of the "task maintenance & status reporting" gateway.

[0048] **FIG. 36** illustrates a preferred embodiment of the "transaction service provider" gateway.

[0049] FIGS. **37-41** depict additional screen shots of the system embodying the invention, showing an exemplary set of tasks required to complete a loan.

DETAILED DESCRIPTION

[0050] The present invention provides a solution to the needs described above through a system and process to be used in the mortgage industry for combining a client Loan Application System with an automated Compliance Engine used for generating and monitoring a set of required procedures involved in moving and tracking a mortgage loan through one or more of the steps of 'originate', 'approve', 'close', 'fund', and 'ship'. The automated compliance engine itself is a system and method for automatically generating a set of required tasks for use in managing the mortgage loan process, including tasks required by applicably federal or state law. The system of the present invention automatically couples the regulatory compliance information engine and a task management system required to process loans and provides methods for integrating the Automate Compliance Engine technology with any third party's loan processing software.

[0051] The heart of various embodiments of the present invention is a module designated an Automated Compliance Engine (the "Compliance Engine") which is designed to maintain and use a rules-based loan compliance database to generate the set of tasks required to be performed to complete and close a specific mortgage loan transaction. This Compliance Engine is described in more detail below. Similarly, the method of the interface between the compliance engine and a client loan application processing system is described in more detail below. However, we now describe a general overview of a preferred embodiment of the invention.

[0052] (1) General Overview

[0053] All mortgage loans will be originated through the applicants (OnePipeLine.com) website. In the future, websites other than Applicant's will be used to originate loans that will interface with the compliance engine. The technology used as part of the system currently is able to interface with many other industry standard software programs to make the exchange and flow of data easy and accurate.

[0054] The system is predominantly web-enabled, which extends its use to all industry professionals connected to the Internet. The system contains the Compliance Engine that applies Federal, State, Local, and profession based filters to each loan application and each Loan Originator to create a combined task list that defines a custom workflow process for every transaction originated through the System and Program, which forms the basis for monitoring the steps and procedures required for a specific loan transaction in order to provide a completion report for the specific mortgage

loan. The rules applied to each new mortgage loan application will determine who is permitted or required to perform which services in the loan origination process under the Program and who will receive fair market compensation for services actually performed. The System then creates a record of the actual workflow. The list, as a composite of compensation or origination tasks and required tasks, is represented as a 'task list', and may optionally be presented to a subscriber client through an API.

[0055] In a preferred embodiment of the invention, the automatic compliance engine's processes and workflow are integrated with the client's loan origination system (LOS) in a manner which results in a compliant loan. The resulting system, which is the product of the client's LOS and the compliance engine and its interface, provides comprehensive workflow, forms and disclosures, closing requirements, tracking, a compliance report, a compliance certificate of guarantee. The net result is a product which is a lender branded business to business system, thereby opening a new channel with which to compensate third party originators.

[0056] In a preferred embodiment, the main features of the union of a client LOS and the compliance engine are:

[0057] 1) a XML based programming interface that allows for specific loan and compliance data to be shared between the compliance engine and the client's consumer direct web-based LOS. The XML messages are delivered back and forth between the compliance engine system and the client LOS using HTTPS POST events.

[0058] 2) a series of branded web pages—hosted by applicants—that control and manage the delivery of the consultative and prequalification compliance steps.

[0059] The development of this XML based interfaced system usually requires a business process review of the client's LOS with recommendations of changes and enhancements necessary to move them to a compliant third party loan origination system. These changes encompass technology, web page content, and business processes that need to be performed, typically by the client's employees.

[0060] (2) Detailed Description

[0061] In an embodiment of the combined client/lender LOS and applicants compliance engine ("the System"), the Borrower and Loan Originator work together throughout the loan origination process. Once a Borrower decides to work with a Loan Originator on the System, the System will have the Borrower and Loan Originator answer typical financial and property questions concerning the Borrower. The answers to these questions will allow the System to prequalify the Borrower for a loan and offer appropriate loan program options to the Borrower, and authenticate the loan Originator in the system. For example, when an agent originator is ready to begin the loan process, he/she must be authenticated through Applicant's credentialing database. The primary mechanism for this to occur is through an XML API developed by applicant and implemented in the client LOS.

[0062] It is necessary for the agent to review the process with their client, pre-qualify their client as to the amount of home and loan amount they can afford, and to disclose certain information to their clients via business disclosure forms. When this part of the transaction is completed, a loan instance is created using the compliance engine and the appropriate tasks are marked as complete. Additionally, the compliance engine system generates an ACS ID# which is a unique transaction identifier, which becomes part of the Loan Record which will be created using the Client's LOS. This identifier can either be manually entered by the agent or programmatically delivered from the applicants system to the lender system using the designed XML API. The client will use this unique identifier to track and report back to applicants compliance engine system on the progress of the loan through the rest of the process.

[0063] At this point in the process, the agent is directed back into the client's consumer direct LOS (which has been reviewed and modified for third party loan origination). Once the System makes this information available to the Borrower and Loan Originator, the Borrower will be able to choose to make a formal mortgage loan application on-line through the Loan Originator.

[0064] After the agent has worked through the Client's loan application system (at the point the application is submitted for processing) The compliance engine system needs to receive a subset of the collected loan data in order to update the compliance record in the compliance engine system. The compliance engine will use that data to update the task list and recheck the compliance of the loan application. The data coming back to Applicants will be delivered either programmatically using the XML API or through a manual web page interface that the client's loan processors will use.

[0065] (Loan Status Updates): At five specific times during the processing and underwriting process, the compliance engine system needs to be made aware of changes in the loan status. The compliance engine system notifies the third party originator so they can keep the borrower up to date and the loan progress. The client's LOS can notify the compliance engine system of these status changes using the XML API or the client can alter it's business process to have the loan processor come to the compliance engine system web site, and manually make the changes to the loan status.

[0066] Closing & Certification Data Transfer: When the loan is ready to go to closing, the client needs to receive from the compliance engine system key information pertaining to closing instructions that must be followed to ensure the HUD1 document is prepared correctly.

[0067] During the processing of the loan, certain data may have changed which would impact the compliance of the loan. For this reason, the client must reconfirm with the compliance engine system the loan details.

[0068] The client can transmit the loan data to the compliance engine system via the XML API or via a web based manual interface (similar to what is described above). Upon receipt of this data, the compliance engine system evaluates it and produces a Compliance Report and loan specific Closing Instructions (related to compensating the third party loan originator). The compliance engine system delivers the report and instruction back to the Client using the same mechanism that was used to request this information (i.e. XML API or web page).

[0069] After closing, there are two things that need to be delivered to the compliance engine system provider (applicants):

[0070] A check to compensate applicants and the third party originator, and

[0071] A copy of the entire loan file for archiving purposes.

[0072] Once these two items are received by applicants, the compliance engine system, produces a 'Compliance Guarantee', which is printed out and placed into the loan file.

[0073] An exemplary sequence of events is as follows:

[0074] The Loan Originator consults with the borrower about the property and loan products generally available,

[0075] After entering the required data, including a self-declared credit profile, the application is programmatically compared to available products, typically using a service and program of the type provided by GHR's PremierPricer™ software, or client's own system.

[0076] If a list of suitable products is returned by a GHR-like system, the Loan Originator assists the Borrower in selecting the preferred loan product, The Application is then re-submitted to the GHR-like product selection system and the credit rating of the Borrower is programmatically obtained,

[0077] With the 'official' credit rating available, the GHR-like system returns a list of one or more loan products,

[0078] If the desired loan product is on the list, then the application process proceeds to underwriting,

[0079] If the desired product is not available, but there are other loan products, then the Loan Originator and the Borrower will select and apply for another suitable loan product,

[0080] If no loan products are available, then the system returns an appropriate notification, and the loan application is forwarded to the lender, with the initial desired loan product, for human review, adjustment, and probable selection of a suitable loan product for underwriting.

[0081] Making either selection will notify the System of the Borrower's intent to proceed with the mortgage loan origination process and will initiate the rules evaluation process, coincident with underwriting of the loan, as described in the next paragraph.

[0082] The System's Compliance Engine will apply a set of rules appropriate to each mortgage loan transaction, including property and borrower profile, originator's professional guidelines, state and federal regulations and other relevant rules. The final filtered task list will then apply to each mortgage loan transaction in an attempt to assure that the mortgage loan is originated in accordance with applicable federal and state laws. This will include, making sure that qualified Loan Originators, Independent Contractors and Local Loan Processors are permitted to perform services associated with the loan origination process and that all services required to be performed in order for the Loan Originator, Independent Contractor and/or Local Loan Processor to receive compensation in connection with the mortgage loan transaction are actually performed.

[0083] Based on the mortgage loan origination process requirements defined by the Compliance Engine, the Loan Originator will make decisions about each of the service providers (e.g., inspection companies, surveyors, appraisers, title companies, etc.) the Loan Originator wishes to have involved in the mortgage loan transaction. Any qualified service provider will be able to be selected by the Loan Originator and entered into the System at this point. Some nationwide service providers may, in the future, have a direct online ordering system available inside the System. Others may still require the typing in of the name and contact information. Applicants expect that it will be most common for Borrowers to select local service providers with whom they are familiar.

[0084] After the Borrower selects the service providers, the Loan Processor will confirm to the system which services have been provided by the Loan Originator. As described in more detail below, the services actually performed by the Loan Originator, Independent Contractor and/or Local Loan Processors will serve as the basis for the fees earned as fair market compensation for performing settlement services in connection with the mortgage loan origination process under the Program.

[0085] After each of the above steps are completed, the System will automatically create a workflow process based on the applicable rules and appropriate tasks will be eventually assigned to each of the service providers for the mortgage loan transaction. In a preferred embodiment, the mortgage loan data and applicable tasks will be passed to a workflow generation system, either implemented as an integral part of the system of the invention, or as a service provided by a remote application service provider (ASP), which will generate an automated workflow process which can notify each service provider of his task(s) and allowing each service provider to interact in completing needed tasks. All task assignments will be distributed by the System and tracked. At this point, many people will be working on the loan simultaneously though the System. For example, the Loan Originator may be obtaining financial information from the Borrower, the Independent Contractor may be ordering an appraisal, the Local Loan Processor may be verifying Borrower information, and various service providers may be performing services and adding information to the mortgage loan file through the System. Hard copy data will be input by either Applicant's staff, an Independent Contractor (to the extent permitted under state law) or the Local Loan Processor, and added to the physical mortgage loan file. Work notices and status communications may be generated automatically by the System to keep the process moving and to ensure that all appropriate parties perform their assigned tasks in the proper order to meet all rules requirements applicable to the mortgage loan transaction.

[0086] c. Products Available

[0087] Borrowers may obtain a loan using the facilities of the lender organization, in which mode the system of the invention merely determines which tasks are required and tracks the completion of the required tasks. By obtaining a loan through the Program, Borrowers will be given access to a wide variety of first lien, fixed and variable rate, closed-end mortgage products (both purchase money and refinance-

ings) at competitive rates and pricing, and in a timely and efficient manner. For example, as noted above, Applicants will make available to the Borrower, loan products and interest rates that are available from its participating lenders. Applicant's System and Program also will make available and support secondary lien, fixed and variable rate, closed-end loan products and interest rates available from its participating lenders. In the future, Applicants may give Borrowers access to first and second lien, fixed and variable rate, open-end mortgage products through the Program. Applicant's Program and System will not make available or support mortgage loans that constitute "High Cost" or Section 32 mortgage loans, which are covered by Section 32 of Regulation Z, 12 C.F.R § 226.3

[0088] d. Funding Source

[0089] In a preferred embodiment, Applicants will not fund any mortgage loans, and no mortgage loans will be closed in Applicant's name. Applicants will be acting exclusively in the capacity as mortgage broker. All mortgage loans will be funded by, and closed in the name of, a participating lender. In an alternative embodiment, Applicants could fund certain mortgage loans and close loans in their name in those jurisdictions where qualified to do so.

[0090] e. Disclosures and Form Documents

[0091] In a preferred embodiment, the System will produce applicable Borrower disclosures (on a state specific basis) required under applicable law to be provided to the Borrower in connection with the mortgage loan origination process under the Program. The Loan Originator will be required to provide the disclosures to Borrowers at the appropriate times. Moreover, the Loan Originators will be required to provide the Borrower with a disclosure that informs the Borrower that the Loan Originator will receive compensation for services actually performed by the Loan Originator in connection with the mortgage loan transaction. This disclosure also will inform the Borrower that the Loan Originator is an exclusive part-time W-2 employee of Applicants, and that the Borrower is free to use another mortgage broker or lender other than Applicants.

[0092] The System also will allow a lender to elect to use a standard set of mortgage loan documents, which can be printed off of the System, in connection with a mortgage loan originated through Applicant's Program, or the Lender may use its own forms. The forms available off of the System will be provided to Applicants by a third-party document vendor.

[0093] f. Mortgage Loan Fees

[0094] Fees will generally include, among other permissible fees: (1) origination fee payable to the lender and passed through to the Loan Originator based on services performed; (2) underwriting fee payable to the lender and passed through to Local Loan Processor; (3) impound waiver fee payable to the lender and passed through to secondary market investor (only on loans without escrow accounts); (4) processing fee payable to the lender and passed through to Local Loan Processor; (5) document preparation fee payable to the lender and passed through to third-party vendor; (6) tax related service fee payable to the lender and passed through to third-party vendor; and (7) attorney fee payable to lender and passed through to closing attorney. Applicants will charge a lender a membership fee to participate in Applicant's Program and a flat fee for each Completion Certificate issued to the lender.

[0095] g. Loan Originators

[0096] In a preferred embodiment, mortgage loans will be originated through the System and Program by licensed real estate sales professionals, such as real estate agents/salespersons and, in limited cases, real estate brokers. The individual real estate agents and individual real estate brokers (i.e., brokers that are not corporations or similar business entities) will enter into an employment agreement with Applicants, and become part-time W-2 employees of Applicants. The employment agreements will expressly require the Loan Originator to originate mortgage loans exclusively for Applicants, and prohibit the Loan Originators from receiving compensation for performing loan origination services for another mortgage lender or mortgage broker.

[0097] In the future, other non-traditional originators, such as investment advisors, financial advisors, accountants and other professionals may be added to the Program as Loan Originators, in each case to the extent permitted by applicable law. Loan Originators may also have an affiliation with a mortgage lender, which defines the selection of loan products the Loan Originator may offer.

[0098] i. Local Loan Processors

[0099] In a preferred embodiment, wherein the loan is being processed through the system of the invention, loan processing functions which would trigger mortgage broker or similar licensing requirements under applicable state law will be delegated to properly licensed Local Loan Processors who will receive compensation intended to be fair compensation for services actually rendered by them. The Local Loan Processors will be either mortgage brokers and mortgage bankers.

[0100] j. Services Performed

[0101] As noted above, in a preferred embodiment, a Loan Originator will initiate the mortgage loan process with a borrower using Applicant's System. The services that a Loan Originator will have to perform, in all cases, in order to be fully compensated include the following: (1) obtaining the applicant's signature on disclosures, (2) obtaining the applicant's signature on the credit authorization, (3) pre-qualifying applicants, (4) assisting applicants in selecting loan products, (5) taking the loan application or obtaining loan application information, (6) reviewing the credit decision with the applicant, (7) explaining the good faith estimate and other disclosures to the applicant, (8) collecting documentation from the applicant that is needed in connection with processing and underwriting the loans, (9) updating the applicant and responding to applicant inquiries, (10) locking the interest rate, and (11) scheduling and attending the closing.

[0102] If a Loan Originator does not perform all required services, the services will be performed by Applicant's staff, Lender's staff, an Independent Contractor (to the extent permitted under applicable state law) or by a Local Loan Processor, and the compensation received by the Loan Originator will be reduced accordingly.

[0103] By way of additional background, the basic of the rules and regulations which form the heart of the present invention are now described in more detail.

[0104] RESPA Compliance

[0105] The following is a brief summary of RESPA and its implementing regulation, Regulation X, and their requirements. It is not intended to be comprehensive. For example, RESPA and Regulation X may not apply in all situations, and their application is not discussed below. Users should consult RESPA, Regulation X and independent legal counsel for complete explanation of RESPA, Regulation X and their requirements.

[0106] The Real Estate Settlement Procedures Act ("RESPA") is a federal statute that was enacted by Congress in 1974. A federal regulation implementing RESPA ("Regulation X") also has been promulgated by the United States Department of Housing and Urban Development ("HUD"). HUD is the federal agency charged with administering and enforcing RESPA, Regulation X and their requirements.

[0107] RESPA was enacted to provide Borrowers with greater and more timely information on the nature and costs of the home buying/settlement process, and to protect Borrowers from unnecessarily high settlement charges caused by certain practices believed to be abusive. Among other requirements, RESPA and Regulation X prohibit the payment or receipt of "any fee, kickback or thing of value" (i.e., a referral fee) in exchange for the referral of settlement service business. Settlement service business includes, among other services, loan origination services such as taking applications, obtaining income verifications and communicating with a borrower or lender.

[0108] RESPA and Regulation X permit a lender to make reasonable payments to its agents and contractors for services actually performed in the origination, processing or funding of a loan. Based on interpretations of this provision in RESPA and Regulation X, real estate sales professionals and others may, in certain circumstances, provide loan origination services and receive fair market compensation for the services they actually perform.

[0109] The preferred embodiment of the invention in Applicant's program and system are designed around this provision. Applicant's loan originators are required to perform certain settlement services in connection with loans originated by Applicants, and the compensation received by these loan originators and regional loan processors is intended to be fair market compensation for the services they actually perform.

[0110] Other Federal and State Compliance

[0111] The following is a brief summary of other federal and state statutes, regulations and laws that impact Applicant's system and program, and a user's performance of services under this system and program. It is not intended to be comprehensive. Users should consult the statutes, regulations and laws, and independent legal counsel, for a complete explanation of other applicable federal and state statutes, regulations and laws.

[0112] Among other federal laws, the Truth in Lending Act ("TILA") and the Equal Credit Opportunity Act ("ECOA") impact Applicant's program and system, and the user's performance of services under applicant's system and program. The TILA, and its implementing regulation, Regulation Z, were enacted and promulgated to assure meaningful disclosure of credit terms so that the Borrower will be able to compare more readily the various terms available to the Borrower. Under the TILA, certain disclosures are required to be made to the Borrower prior to the consummation of a mortgage loan transaction.

[0113] The ECOA, and its implementing regulation, Regulation B, were enacted and promulgated to require that lenders engaged in the extension of credit make that credit equally available to all creditworthy Borrowers without regard to race, color, religion, national origin, sex, marital status, age, receipt of public assistance or the fact that the Borrower in good faith exercised any right under the Federal Consumer Credit Protection Act. In addition to the prohibition against discrimination, the ECOA and Regulation B also contain, among others, requirements regarding the provision of appraisal reports, evaluation of applications, spousal signatures, and the provision of adverse action notices.

[0114] Regarding state laws, most jurisdictions have enacted licensing statutes that may require real estate sales professionals, builders, financial institutions/lenders and mortgage brokers to obtain a license and satisfy various other financial, educational and operational requirements. Most jurisdictions also have enacted laws that impose, among others, requirements regarding the types of fees that may be charged to a Borrower in connection with a mortgage loan transaction and the persons entitled to receive such fees, as well as certain jurisdiction-specific disclosures that must be provided to the Borrower.

OPERATING ENVIRONMENT

[0115] The environment in which the present invention is used encompasses the use of general purpose computers as client or input machines for use by loan originators, lenders and other parties interested in the mortgage loan process. Such client or input machines may be coupled to the Internet (sometimes referred to as the "Web") through telecommunications channels which may include wireless devices and systems as well.

[0116] Some of the elements of a typical Internet network configuration are shown in FIG. 1, wherein a number of client machines 105 possibly in a branch office of an Real Estate Service, or financial institution, lender, etc., are shown connected to a Gateway/hub/tunnel-server/etc. 106 which is itself connected to the internet 107 via some internet service provider (ISP) connection 108. Also shown are other possible clients 101, 103 possibly used by other loan originators, or interested parties, similarly connected to the internet 107 via an ISP connection 104, with these units communicating to possibly a home office via an ISP connection 109 to a gateway/tunnel-server 110 which is connected 111 to various enterprise application servers 112, 113, 114 which could be connected through another hub/router 115 to various local clients 116, 117, 118. Any of these servers 112, 113, 114 could function as a server of the present invention, as more fully described below. Any user situated at any of these client machines would normally have to be an authorized user of the system as described more fully below.

[0117] An embodiment of the Mortgage Loan Management System of the present invention can operate on a general purpose computer unit which typically includes generally the elements shown in FIG. 2. The general pur-

pose system **201** includes a motherboard **203** having thereon an input/output ("I/O") section **205**, one or more central processing units ("CPU") **207**, and a memory section **209** which may or may not have a flash memory card **211** related to it. The I/O section **205** is connected to a keyboard **226**, other similar general purpose computer units **225**, **215**, a disk storage unit **223** and a CD-ROM drive unit **217**. The CD-ROM drive unit **217** can read a CD-ROM medium **219** which typically contains programs **221** and other data. Logic circuits or other components of these programmed computers will perform series of specifically identified operations dictated by computer programs as described more fully below.

DETAILED DESCRIPTION OF THE INVENTION

[0118] In consideration of it's major aspects, the present invention is a system and methodology, comprising a 'container' concept, wherein the mechanics of real estate transactions beginning with loan origination and proceeding serially and in some instances in parallel through the closing, funding and disbursement and reporting of funds may be accomplished. The system also controls the timing of the process and the time allocated to the completion of each loan occurrence. When the time allocated to a process expires, the task is transferred as required by the rule base. The system, constituting the present invention, is designed to programmatically manage and document all attendant processes with compliance to applicable regulatory rule sets and requirements of participating workers. In a preferred embodiment, data exists within the executing programs as 'objects', the meaning of which as commonly understood by those skilled in the art of 'object-oriented programming'. In a preferred embodiment, the software programs comprising a portion of the present invention are also object-oriented. An integrated relational database management system is utilized to maintain persistent data and to permit and facilitate queries and reports against the persistent data. While the embodiment of the present invention embraces certain elements of a 'closed loop', or self-contained decision-making process, it's strength lies in the ability to orchestrate the workers or agents participating in the lending transaction with respect to responsibilities and financial compensation.

[0119] The system of the invention encompasses a means whereby the object-oriented 'instances' or discrete occurrences of data, may be stored and retrieved from the relational database management system. In the preferred embodiment, such storage and retrieval is accompanied by programmatic conversion of said data instances to 'formats', or preferred representations upon which the required program(s) may act. Such data storage occurrences and the accompanying manipulations of said data follow preferred programmatic documentation procedures such as sequentially 'nested' descriptors. An example of a sequentially 'nested' descriptor would be, 'borrower.occupation', where the nested descriptors are separated by a '.' or 'dot', and in such manner are understood to mean, 'the identified borrower's occupation'. Such 'dot' notation will hereafter be used to describe the higher level of programmatic functionality when such explanation is necessary. Those skilled in the art will understand JAVA™ programming, Object oriented Programming, and the use of automated "Agents" to perform programmed tasks whenever activated to do so, HTTP, XML and other communications protocols as described in more detail below.

[0120] An exemplary way to articulate the concept and embodiment of the present invention is the idea of a 'container', which brings together the loan originator, the subject real property attributes, and the lender, as well as means to validate transaction profitability and bundle said transactions for sale to lenders. Or in an alternative view, as a means for generating the required compliance tasks for a specific loan transaction, provide the tasks to a lender and monitor the completion of all required tasks by the lender's service providers. The present invention provides decision points wherein the loan originator makes selections from menu(s) generated by the compliance engine acting upon the original information supplied by the originator. The selection process introduces the refined data into an integrated 'workflow' process wherein rule-based engines and other workers or agents act toward a common goal of closing, funding, shipping, and collecting transaction fees on a loan.

[0121] Referring to **FIG. 3** there is illustrated, in schematic form, a preferred embodiment of the present invention. The business model is comprised of several functional elements, including at the highest level, embodiments which effect loan origination **301**, closing, processing **303**, funding **305**, and shipping **307**, with transfer of funds. In concert, these elements may be referred to as the 'pipeline' or system which embodies the whole of the several elements comprising the present invention.

[0122] As indicated above, the present invention is a method and apparatus for automating the process of generating a set of tasks required for controlling, and regulating a mortgage loan application, underwriting the loan, and tracking the tasks through the closing process, wherein the tasks comply with all known Federal, State and local requirements for the specific loan. Elements of an alternative embodiment include loan origination, authenticating the loan originator, underwriting the loan, closing, processing, funding, and shipping, with transfer of funds, within the regulatory legal framework of funding and reporting, required for these processes. In a preferred embodiment, which is described in detail below, some or most of these functions may be performed by the lender or application service providers (ASPs) with the system of the invention providing the set of required tasks generated by a Compliance Engine and simply monitoring the completion of those tasks.

[0123] Referring now to **FIGS. 4A, 4B, 4C** and 4D, the principal elements of a preferred embodiment of the present invention are illustrated in more functional detail. Original inputs from a lender/loan originator come into the system **401** through the 'Loan Origination Gateway' (**451** in **FIG. 4C**) or portal, which serves as an 'entry point' or gateway to the 'pipeline' or system for loan originator data and borrower data. The loan originator data **403** is used as input data to an authentication module (**453** in **FIG. 4C**) to verify the lender/loan originator's ID and password. Those skilled in these arts will recognize that this authentication process for the client/user may include digital signature authentication as well as other types of cryptographic verification and authentication of users. If the lender/loan originator's ID and or password do not authenticate, a message is sent back to the originator indicating that fact and the system exits. If the

loan originator is found to be qualified, the loan originator data and borrower data are passed to the Compliance Engine **405** (476 in **FIG. 4D**) for later use. The borrower-supplied credit data is then passed to a Loan Origination & Program Matching module **407** (456 in **FIG. 4C**). The Loan Origination & Program Matching module returns a list of loan products for which the borrower is qualified **409**. In a preferred embodiment, this function is provided by a PremierPricer™ program supplied by GHR Systems™ Inc. The PremierPricer™ Component is described in more detail at the GHR Systems web site, which can be found at www.ghrsystems.com, which description is hereby incorporated fully herein by reference. Additional detail on the interface to this PremierPricer™ Component is provided below. In an alternative embodiment, the Loan Origination & Program Matching module is one which is supplied by applicants as an integral part of the pipeline system, wherein up-to-the-minute product and pricing information is provided when the module is supplied with basic transaction parameters (i.e., LTV, loan amount, property location, property type, etc.).

[0124] Continuing with reference to **FIG. 4**A, borrower then selects a loan from the list of loan products for which the borrower is qualified and submits a loan application **411**. In a preferred embodiment, the system, recognizing the loan application selection, submits a credit report request to a credit bureau **413** and passes this data to the GHR Systems PremierPricer™ Component **413**. A list of loan products for which the borrower is qualified are returned to the lender & borrower **415**. If the borrower is not qualified for any loans, **419** the loan request is referred to a loan officer and the system exits **429**. If the borrower is qualified, he selects one of the listed loans (his original selection may or may not be on this list) **421**, **423**. Referring now to **FIG. 4B** the lender uses this data to process the loan and inputs loan approval data to the system **431**.

[0125] The loan data is passed to the Compliance Engine **431** (**477** in **FIG. 4D**). As part of this set of input data the user/lender selects optional tasks for this loan and inputs his selections along with data indicative of his fee arrangement with the borrower **432**. Referring now to **FIG. 4D**, this data is passed by the system to the Compliance Engine **479** and the Compliance Engine uses these data (the loan data **477** and the user task selections **479**) to generate a required set of tasks for this specific loan (**433** in **FIG. 4B**). This required set of tasks is generated **478** by selecting the tasks from the task file **480** which are specifically required by the particular loan (i.e. loan type, location, value, etc.) and the context **481** (i.e. the combinations of circumstances where the tasks apply). The resultant set of tasks for the specific loan **483** is separately recorded **482** in a file which can be modified as new tasks may be added or deleted, and as task completions are identified **485**.

[0126] In a preferred embodiment, the system can supply this required task list in its entirety to the lender if the lender wishes to manage the task completions himself through his own automated systems (see **441**, **443** in **FIG. 4B**). In this case, the system would merely monitor task completion data **445** (see also **485**, **486**, **487** and **488** in **FIG. 4D**) and if required, issue a Completion Certificate **447** when the tasks are completed and the loan process closed. If the user/lender wants Applicants to handle the loan, the Compliance Engine can transfer the set of tasks for this loan to an internal Loan Processing & Workflow engine **437**. This internal Loan Processing & Workflow engine (Forte Conductor™, Framework Lendware™, etc) (see also **462**, **463**, **464**, **466** and **467** in **FIG. 4C**) will automatically transmit specific tasks to specific workers who have been previously identified as responsible for those kind of tasks **438**, will supply task completion data to the Compliance Engine **440** when tasks are completed. The Compliance Engine will supply the completion data to the system so as to generate worker compensation and loan completion reports (see **468** in **FIG. 4C**), and Completion Certificates **442**. The final process module in the system, the Banking & Loan Management process (**469** in **FIG. 4C**), adds the loan, if it was provided by Applicants, and its related financial parameters to the inventory of loans managed by applicants. In a preferred embodiment, this Banking & Loan Management process **469** includes a secondary banking engine which manages the packaging and placing of loans with secondary financial institutions so as to optimize the financial returns on the loans handled by applicants. This process would be managed by Lendware™ via an on-site installation or by a Framework™ application service provider (ASP) or equivalent implementation. In an alternative embodiment, this secondary banking engine which manages the packaging and placing of loans with secondary financial institutions so as to optimize the financial returns on the loans handled by applicants would be a package developed internally by applicants.

[0127] A depiction of an alternative embodiment of the present invention is shown in **FIG. 5** which describes the elements shown in **FIGS. 4A**, **4B** and **4C** in a different depiction. Each of these features is described in more detail below. The 'Loan Origination Gateway'**501** or portal, serves as an 'entry point' or gateway to the 'pipeline' or system. The loan originator enters data for both himself and for the borrower. This data is passed to the Authentication module **503** which uses these data as inputs to the Compliance Engine **520**. The Compliance Engine **520** uses these data from its associated worker's description **521** and legal context **523** files to determine whether the loan originator can originate this loan for this property. If so, the Authentication module **503**"authenticates" the transaction and passes the information to the Loan Origination System **505** for analysis of correspondent pricing and for underwriter approval. As indicated above, this function could be performed by the system or through the interface to an equivalent service such as the PremierPricer™ product supplied by GHR Systems™ Inc. Then the loan originator is asked to indicate which tasks he will do (of the optional tasks available) **519**. These optional task and fee data along with the original Loan Originator data and borrower data and underwriter data are then passed to the Compliance Engine **520** wherein the mandatory tasks identified based on the legal requirements for this loan originator and this location of the property, and the selected optional tasks are combined by the Compliance Engine **520** into a required set of tasks for this loan and passed as inputs to the Loan Fulfillment System **545**. The Loan Fulfillment System **545** assembles the inputs and task requirements for input to the Mortgage Workflow Engine **553** which automatically manages the task execution by various responsible parties. In the process of managing the execution of the required tasks the Mortgage Workflow Engine **553** automatically communicates with parties having an interest in this loan via the Task Mainte-

nance & Status Reporting Gateway **550** and communicates with various service providers via the Transaction Service Provider Gateway **555**. When the loan is finally closed (i.e. all designated tasks completed) this status is communicated to the Compensation & Task Performance Report system **557** for the generation of these reports. The loan completion status is also communicated to the Secondary Banking & Loan Inventory Management system **563** which adds the completed loan data to the loan inventory and periodically, using a Secondary banking Engine **559**, optimally packages certain loans for transfer to secondary funding sources.

[0128] Having described a preferred embodiment and an alternative embodiment of the applicants invention, we now describe the major components in more detail. FIGS. **7-11** indicate the basic original entry into the automated system and shows the kinds of data that is inputted. These data are then processed as follows.

[0129] The 'Loan Application Gateway'

[0130] Referring to **FIG. 33,** A loan originator, in any of several manifestations, may originate a mortgage loan request on behalf of a client, a 'borrower'. The 'Loan Application Gateway' provides for the Lender/Loan Originator to enter his data and borrower data **3401** and envisions at a minimum, three (3) ways by which the system may be accessed by a loan originator; (1) via Internet website **3405** of the assignee of the present invention, the data typically being in HTML format; (2) via custom-written software **3403** which connects in a data transmission-enabled manner to the present invention and would typically be in XML format; and (3) via 'wireless' devices, including web-enabled cell phones, wireless, modem-equipped hand-held or laptop computing devices, satellite communication devices, and other such wireless data and communication methods and devices **3407** as may come into common use, these data typically being in the WML or WAP formats, or other formats as may come into common use. The principle purpose of the 'Loan Application Gateway'**3400,** in serving as a portal, is to provide a way for the loan originator to exchange required data with to the 'Loan Application System' without having to worry about what input method he is using and/or the related data formats and protocols. Consequently the major purpose of the input gateway is to perform the middleware tasks of—recognizing the input channel and data format and protocol used **3409** and convert the data to the standard Application Programming Interface (API) format **3411** which will be used by downstream modules. This standard Application Programming Interface (API) format **3411** is described in more detail below in the section covering the Compliance Engine.

[0131] The input data originates from the input screens provided by the system. Upon making the connection to the Applicants system, the loan originator is presented with introductory screen sets (FIGS. **7-12**) and input screen sets (FIGS. **13-18**) whereby the particular information which describes, to the Applicants system, the circumstances of the borrower, as well as the property under contemplation for purchase. Suitable reference and 'help' screens are made available to the loan originator to assist in the entry of required data. Notably, display information and on-screen prompts for data input are tailored to the nature and speed of the data link as well as the display limitations of the terminal device in use by the loan originator.

[0132] Referring to FIGS. **7-18**, such data or information is required for originating and underwriting a loan, and typically includes the following: a subscribing loan originator's identification **FIG. 7**, pertinent information sufficient to identify the pending borrower **FIG. 13**, and information on the subject property **FIG. 14**. The subscribing loan originator's identification **FIG. 7**, in turn, provides the present invention with a profile of the originator and the location of the property in question thereby providing sufficient information to facilitate authentication of the originator's qualification, according to regulations, to originate a loan, and other such information as is deemed necessary to logically connect the originator with agents, workers, or services which have been associated with the originator as 'loan affiliates'.

[0133] These 'affiliates' constitute a variety of resources which may be called upon on a loan-by-loan basis to provide services common in the industry, to the originator in order to complete the loan.

[0134] The Authentication System

[0135] In a preferred embodiment of the system, a Lender may make use of the Applicants system merely to obtain the set of tasks required for a specific loan, including tasks required by applicable federal and/or state law, and to obtain a Completion Certificate, or he may originate a loan through Applicant's network of Loan Originators also obtaining a Completion Certificate based upon the systems monitored performance of the required tasks involved. In either case the Loan Originator's qualifications are not verified by the Compliance Engine. That is, the Compliance Engine does not check the lenderid and property location to determine whether this Loan Originator is qualified to represent this loan applicant.

[0136] In an alternative preferred embodiment, this authentication of the loan originator/lender is performed. This process will now be described. Upon completion of data entry by the loan originator, the Applicants system launches a validation or 'authentication' process **403** in **FIG. 4A and 503** in **FIG. 5**. The authentication module verifies the identity of the loan originator through the use of conventional means, a security 'login' typically requiring user names and passwords, which are programmatically verified as belonging to the loan originator. Various data security mechanisms may be incorporated in this sub-system as well, including the use of digital signatures as required. The completeness of the required input data is also verified. The Authentication module also authenticates the loan originator as being qualified to originate a loan for the property location specified. The module gets the loan originator and borrower input data **401** and calls the 'Compliance Engine'**405**, to determine whether the loan originator can originate this loan. If the initial queries to the legal context databases (these are described in more detail below with respect to the compliance engine description) indicate that the loan originator is not qualified then this "not-qualified" data is returned to the loan originator. If the loan originator is found to be qualified to originate loans in the locality a "yes" is returned and the authentication module may instruct the Compliance Engine to complete a "worker profile" for this loan originator, borrower and property.

[0137] The Automatic Compliance Engine

[0138] The Automatic Compliance Engine (the "Compliance Engine"), **(458** in **FIG. 4C and 520** in **FIG. 5**), is now

described in a preferred embodiment. The Compliance Engine is called a number of times by several modules.

[0139] As described above, many government, professional, and business institutions impose requirements on land and mortgage lending transactions. A requirement can be the disclosure of specified information to the borrower, filling out a required form, or the gathering of specified information, to name a few. Applicants retains the services of legal professionals throughout the country who continuously gather these requirements and organize them into a comprehensive rule base. The purpose of the Automated Compliance Engine is to apply these rules in an automated way to identify all requirements that apply to a specific loan and to track the completion of those tasks. The output of the engine is a task list comprised of all the tasks which the engine has determined need to be completed for a specific loan, augmented with task completion information for completed tasks.

[0140] In a preferred embodiment, the task list is prepared by selecting a subset of tasks from the list of all task definitions known by the Automated Compliance System. Tasks are selected by evaluating expressions written in a dynamically interpreted programming language that test facts pertaining to the specific loan information. If the expression evaluates to true, then all tasks associated with that expression are added to the task list. All of the expressions in the rule base are sequentially evaluated for each loan instance. The Automated Compliance Engine is thus a rule based system, where each expression represents the 'if' part of a rule, and the subset of tasks associated with the expression represents the 'then' part of a rule.

[0141] For example, the following is a set of tasks for a given context:

```
<context>
    <fdr>12</fdr>
    <name>Texas</name>
    <if>eval('loan.property.address.state')='TX'</if>
    <then>
    <taskName>TX Mortgage Broker/Loan Officer Disclosure</taskName>
    <taskName>Property Disclosure--Seller to Buyer</taskName>
    <taskName>TIL</taskName>
    <taskName>URLA</taskName>
    <taskName>Right to Receive Appraisal Disclosure</taskName>
    <taskName>TX Residential Construction Contract Disclosure</taskName>
        </then>
    </context>
```

[0142] Once required tasks are identified, the engine applies lender task profiles in order to override task description, the URL to print a form, and other task information provided in the standard task definitions with more specific values from the Lender Task Profiles. This allows a high degree of flexibility in customizing the engine for specific lender requirements, including changing the wording of the description of the task or changing the form that must be filled out.

[0143] Once the task list has been initially prepared, it is presented to those persons responsible for completing the tasks. This may be as a simple task list transmission to a lender who is doing his own loan origination and/or processing and simply wants Applicants to monitor task completion, or it may be an automatic transmission to an automated workflow process engine. In a preferred embodiment, the automated workflow process engine may be Framework™ Inc.'s "Lendware™" program or a functional equivalent, such as one based on Forte Software™ Inc.'s Forte Conductor™ product. In this case the Workflow process engine presents the tasks to the persons identified as being responsible for doing the task.

[0144] As each task is completed, the Compliance Engine receives notice of the completion event and the task list is updated to include the identification of the person completing the task and the date and time of completion. The task list is considered completed when all required tasks have a completion date. Compensation may be issued to those who performed specified tasks with assurance that all required tasks have been completed and that the compensation is within the bounds of the laws and policies of the participating institutions.

[0145] Data Representation

[0146] In the preferred embodiment, all Compliance Engine inputs and outputs are in represented externally in Extended Markup Language format (XML) which is described in the document found at www.w3.org/TR/1998/REC-xml-19980210 which is incorporated fully herein by reference. XML provides an extensible hierarchical data structure where each element of information is labeled with a tag and optionally contains a value and any number of child elements. Internally, the same information is represented and manipulated in a standard tree format using the Document Object Model tree (DOM) which is described in the document at www.w3.org/TR/REC-DOM-Level-1/level-one-core.html#ID-1590626202 and which is incorporated fully herein by reference. Conversion between internal and external representation is provided by output methods of the DOM tree implementation and input methods of the Java API for XML Parsing (JAXP) which is described in the document at the URL java.sun.com/xml/docs/api/ which is incorporated fully herein by reference.

[0147] For convenience in referring to DOM tree elements, but not of necessity, the tree implementation is extended to provide easier tree traversal using a simple "get(String path)" method that takes a path argument such as 'task.name'. The tags between the dots '.' are parsed out of this path and used to search for corresponding elements in the tree. In this example, the get method searches for the

first-occurring element of the tree with tag "task". Once found, the get method then searches for the 'name' tag among the child elements of the 'task' element, and so on for all the tags listed in the path. Further descriptions herein will use this path notation to refer to specific data elements in the data model trees defined below.

[0148] Alternative ways to represent and access the information could include files, objects, database records, arrays, structs, TCP/IP socket streams, 'if-then-else' statements in a programming language, or other ordinary means for representing structured information.

[0149] Data Mode

[0150] In recognition of the need to automate as many of these activities as possible, to the mutual advantage of the real estate and mortgage loan community, the Mortgage Bankers Association of America (MBAA) recently originated an effort to develop data structure standards to provide standardization of common business transactions in the mortgage industry. This effort is coordinated by a workgroup of mortgage industry representatives and is called the Mortgage Industry Standards Maintenance Organization (MISMO). Initial deliverables of MISMO include 1) an XML Transaction Architecture to encompass data exchanges from loan origination, the secondary market and servicing; 2) a data dictionary to provide business definitions and corresponding tag names of each of the data elements included in the architecture; and 3) a data model to provide relationships between the elements in the business data. The current versions of these deliverables are contained at www-.mismo.org and are fully incorporated herein by reference.

[0151] This description refers to the detailed data model in the MISMO web site mentioned above (www.mismo.org). The Data Model is described therein as follows:

> [0152] "The Data Model is a tool used to understand the relationships between the data elements in the data dictionary. It is a reference to aid in building the XML DTD's. This is not the XML implementation of the MISMO Standard.."

[0153] MISMO Data Model Documentation

[0154] Address

[0155] Address Definitions

[0156] Agreement

[0157] Agreement Definitions

[0158] Entities Attributes

[0159] Entity Listing

[0160] MBA Data Model

[0161] Credit Report

[0162] Party

[0163] Party Credit Definitions

[0164] Party Declarations Definitions

[0165] Party Finance

[0166] Party Finance Item Definitions

[0167] Party Person Definitions

[0168] Product

[0169] Product Definitions

[0170] Property

[0171] Property Definitions

[0172] MBADataModel v1.ER1

[0173] The Compliance Engine XML/HTTP Transaction API described below includes Example values for clarification.

[0174] The core knowledge of compliance requirements is represented in the 'rules' structure, consisting of 'rules.contexts' and 'rules.operations'. Each 'rules.contexts.context' represents an if/then rule, where the 'context.if' part describes a specified loan situation (context), and the 'context.then' part is a list of 'taskname' references to the tasks that are required in that context. Each 'context.if' definition is expressed in a programming language statement that examines the facts of a specific loan and evaluates to true or false, as described in the algorithm description below.

[0175] Each 'rules.operations.task' defines detailed information about a specific task, independent of the contexts in which it may be required. This information includes a description of the task, a URL link to any forms that may be required for the task, a time period within which the task is expected to be completed, and potentially other information pertinent to a task. References from the context structure in each 'rules. contexts.context.then.taskname' are matched with the corresponding name in 'rules.operations.task.name'. In this manner, a detailed task definition is associated with one or more specific contexts, by task name reference.

[0176] This separation between tasks and contexts is a convenience that allows a task to be defined in a single place yet be associated with multiple contexts. Alternatively, the 'rules.operations' list could be eliminated by replacing every 'rules.contexts.context.then.taskname' with an equivalent 'task' structure as presently defined in 'rules.operations.task', although many of the tasks would need to be defined and maintained redundantly in this mode.

[0177] Elements of a 'rules.operations.task' definition may be overridden by a corresponding element in an 'override.tasks.task' definition whose 'rules.operations.task.name' matches the 'override.tasks.task.name'. This allows customization by supplying customer-specific information in the task definition, such as a customer-specific form, description in more familiar language, or any other task definition element. Any number of 'override' structures may be applied in sequence, each overriding the result from the previous 'override' application. This allows overrides from customers, and their brokers, agents, and other affiliates to be applied in any desired priority ordering that ultimately determines which override changes will be final.

The method of applying the override information is described in the algorithm below.

[0178] The 'loan' structure contains all the information pertaining to a specific loan application. The loan application contains information about the borrower, the property to be mortgaged, its location, the loan amount, and the type of loan applied for. This is the information that is evaluated by the 'rules.contexts.context.if' expression to determine whether the conditions specified in the context definitions are true in the case of a specific loan.

[0179] Compliance Engine XML/HTTP Transaction API

[0180] The Compliance Engine Application Program Interface (API) defines structures for communication between the Automated Compliance Engine and the external environment. The request is initiated by an external agent with accompanying request parameters described below, and the response is a complete Task Status Report consisting of the 'tasks' list output of the engine plus the completion information of completed tasks. Each output 'tasks.task' defines a task that the engine has determined is required in the case of the specified loan. The list will typically be a subset of all defined tasks. Each task includes the detailed task definition information from 'rules.operations.task', with some elements possibly overridden by corresponding task override information from 'override.tasks.task'.

[0181] Data is exchanged via pre-authenticated HTTP in XML format (DTD available). It is presented in indented format for readability. All XML elements are required.

[0182] The lender must provide, for each loan product, a description containing the product attributes that are required for compliance analysis, such as whether ARM, fixed, balloon, index, etc. Each loan application is linked to this information via the loanproductId compliance parameter, described below. This must be updated whenever the product attributes change.

[0183] The MISMO standard mentioned above contains most of the information required by the Compliance Engine to perform its work, but not all. The key missing pieces are the type of loan product the borrower is applying for, and the lender and agent identification.

[0184] Loan products differ from each other in terms of whether they are adjustable rate (ARM) or fixed, whether the rate is tied to T-bills or some other index, whether there is a Balloon payment, whether the property will be owner occupied or rented out, whether there is cash out or not, etc.

[0185] The loan product information is complex, and there are several compliance rules that arise out of different characteristics of the lender's loan product. In a preferred embodiment, rather than try to identify all facets of the loan product in a structured way and apply rules each time those facets are examined, instead, the loan product information is analyzed by hand, one time, up front, and a decision is made as to what compliance tasks are required for that type of loan. Then when it's time to generate a task list, there is a single rule that indicates if you have loan product type XYZ then you must do tasks 1, 2, and 3. The main piece of information that is not provided by MISMO is the loan product ID, which is the id given the loan product by a lender.

[0186] Besides the loan product ID, the compliance API also requires the lender id, which is used in conjunction with the loan product id to fully identify the loan product, and it also tells us where the loan originator's pay will come from, which lender profile to apply, the lender to send notifications to, etc. The API also requires the loan originator agent id, which identifies who the loan originator is so he/she can be paid appropriately when that time comes. The loan originator id is assigned by Applicants.

[0187] The lender may also provide a task list profile that defines override values for task.description and task.form for any task. These values override the Applicants default values for these fields, if present. This allows lenders to describe tasks in their preferred terminology and to use their own forms, subject to compliance requirements.

[0188] These data provided via the Loan Application Gateway 3400 (described above) include the following exemplary type data:

[0189] New Task List Transaction

[0190] This transaction creates a new loan compliance record in the Applicants compliance database, and creates the task list.

[0191] Input:

```
complianceRequest
    requestType newTaskList  //same as HTTP Request-line URI resource
    lender (loan)
        lenderId             //onepipeline assigned
        lenderLoanId         //lender assigned
    agentId                  //loan originator, onepipeline-assigned agentId
loan                         //loan compliance parameters.
        loanOrigiantionFee   //$. Requires review if over 1% of loanAmount.
        loanProductId        //must match id in lender-provided product
                             spec.
        loanAmount
        propertyType         //single, multiple, occupied, etc., from list
        financingOptions     //cash out, refinance, purchase, etc., from list
        state                //property location, 2-letter state code
```

[0192] Output: Task Status Report (see below)

[0193] Update Transaction

[0194] This transaction updates the loan compliance record when one or more tasks are completed, or when loan compliance parameters are changed. If loan compliance parameters are changed, a new task list is generated, and the old one is moved to the taskListArchive section. Task completion information is retained in both the current task list and in the archived task lists.

[0195] Input:

```
complianceRequest
    requestType update
    lender (loan)
        lenderId
        lenderLoanId
    tasks
        task
            taskId              //matches taskId from task in task list
            agentId             //onepipeline agent id
        completeidDate          //date and time in SQL format
        task
            taskId
            agentId
            completeidDate
        . . .
    loan
        loanOriginationFee      //$. Requires review if over 1% of
                                    loanAmount.
            loanProductId       //must match id in lender-provided product
                                    spec.
loanAmount
        propertyType            //single, multiple, occupied, etc., from list
        financingOptions        //cash out, refinance, purchase, etc., from list
        state                   //2-letter postal state code; NY, CA, TX, etc.
        selfEmployed            //Y or N
```

[0196] Output: Task Status Report (see below)

[0197] Task Status Report Transaction

[0198] Output:

[0199] Format and structure is the same for all transaction types. When changed loan compliance parameters require regenerating the task list, old task lists are preserved in the taskListArchive section. Completion information is present only for completed tasks, in both tasks and taskListArchive sections.

```
complianceResponse
    requestType taskStatusReport
    httpStatus                  //Same as HTTP response code. Success: 200 OK
    lender (loan)
        lenderId
        lenderLoanId
    date                        //status report date and time in SQL format
    tasks
        task
            taskId              //onepipeline unique task id number
            taskName            //onepipeline unique task name
            displaySequence
            lenderTaskName
            description         //may be overridden via lender profile
            form                //.PDF printable form URL. May be overridden.
            stepNumber          //HUD step 1, 2, 3, 4, or 5
            completion          //Present only for completed tasks
                agentId         //onepipeline agent id
                completedDate   //date and time in SQL format
        task                    //same as above
        . . .
    taskListArchive
        archiveDate (date)      //date moved into taskListArchive
            date                //task list creation date and time, in SQL
format
            lender (loan)       //same as lender structure above, as of date
```

-continued

```
            ...
        tasks                   //same as tasks structure above, as of date
            ...
        loan (loanProductData)  //same as request, with replaced loanProductId
information
            ...
    archivalDate (date)
        ...
stepCompletion (completion)
    step (stepNumber x)
        stepNumber              //HUD steps 1, 2, 3, 4, and 5
        complete                //Y or N
        feePercent              //percentage to be paid for this step
        fee                     //feePercent * loanOrigiantionFee, $
        agentId                 //onepipeline agent id if agent completed
        agentPayable            //fee $ if agent completed, else zero
step                            //same structure as above
    ...
step
    ...
step
    ...
step
    ...
```

[0200] Algorithm

[0201] Refer to the description of XML, JAXP, and DOM in the data representation description above, and to the data model description and detail data model elements also described above.

[0202] At startup, the Automated Compliance Engine reads the XML-formatted 'rules' from external storage into memory. This XML stream is parsed by the JAXP parser into a DOM internal tree. For each 'rules.operations.task', the 'task.name' is used as a key in adding task detail definition elements to a java.util.Hashtable to enable looking up a task definition by 'task.name'. Similarly, an array is loaded with each 'task' indexed by 'task.id', to enable looking up each task by the unique 'task.id' integer value. A separate hash-table is loaded with task override information for each lender, again using the 'task.name' as the key. Also, a socket connection to a network is opened by a web server or other HTTP service to enable Compliance Engine users to submit requests to the Compliance Engine server and to return responses. HTTP socket connections are describer described in the document found at www.w3.org/Protocols/rfc2616/rfc2616.html and which is incorporated fully herein by reference.

[0203] Once initialized, the Compliance Engine server operates in a stateless request-response fashion, similar to a web server, following the HTTP protocol. Alternative protocols could be used. The request and response are both formatted externally in XMI. format, and internally in DOM trees, as described in the data representation description above.

[0204] The Compliance Engine API provides for three different request types: New Task List, Task Completion, and Task Status Report. These are described below. The response in all cases is a Task Status Report containing a 'tasks.task' list. The remainder of this algorithm section describes how the task list is created or updated in response to these requests.

[0205] The Compliance Engine also incorporates an 'event generation mechanism', the purpose of which is to trigger actions upon the occurrence of specified events. These events may include a 'pushed' report where a task list is periodically updated according to specified parameters and delivered.

[0206] New Task List

[0207] The New Task List request consists of a 'loan' structure that contains information about a specific loan sufficient to determine which compliance tasks are required.

[0208] The 'tasks.task' list is prepared as follows. Each 'rules.contexts.context.if expression is evaluated, one at a time, in a loop from first to last. The 'if' expression is written in the JPython programming language, which is an interpretive scripting language that can evaluate string expressions at runtime. The Python Programming Language is described in the book "Internet Programming with Python" by Aaron Waters, Guido van Rossum and James C. Ahlstrum, M & T Books (Div. of Henry Holt & Co.) 1996, which is incorporated herein by reference. Other languages could be used. The expressions typically reference a specific element in the 'loan' structure to see if the element contains a specific value.

[0209] For example, to determine if the loan property is in the state of Utah, the expression could be "val('loan.property.address.state')=UT"'. The "val() method takes a string describing a path into a DOM tree, and returns the first value of the first DOM node found on that path. If the actual value of the 'loan.property.address.state' node of a specific loan was 'UT', the expression evaluates to true, otherwise false. When such an 'if' expression evaluates to true, all of the associated 'rules.contexts.context.then.taskname' references are followed by using the 'taskname' value as a key to look up the referenced task detail definition through a java.util.Hashtable populated at startup.

[0210] After finding the task detail in the hashtable, the 'rules.operations.task.name' task detail definition structure could be copied directly to an output task list; however, for convenience in the preferred embodiment, the integer value of the included 'rules.operations.task.id' element is used to set a corresponding bit in ajava.util.BitSet. This 'id' integer

value is unique for each task in the 'rules' set. After all rules have been evaluated and all applicable bits are set, the resultant BitSet contains a true bit for every task with a true 'if' expression. The BitSet thus represents the subset of all tasks which the Compliance Engine has determined to be required in the case of the specified loan. The purpose of this BitSet representation is to allow, in the future, rapid and simple boolean operations (and, or, or not operations on the BitSet) to combine task lists from different rule sets to improve flexibility and/or increase performance. One way to increase performance, for example, is to create a BitSet at startup time from a rule set that contains contexts that are always true for every loan. This initially created BitSet can be combined with the dynamically created BitSet using a bitwise 'and' operation in a manner that avoids unnecessary re-evaluation of some rules.

[0211] Once a final BitSet is constructed, the program loops through each bit in the BitSet, and where a true bit is found in a particular bit position, the bit position is used as the index to retrieve the corresponding 'task' definition structure from the array that was indexed at startup time using the matching 'task.id' integer value. This 'task' detail definition structure is then copied and the copy appended to the DOM output tree containing the output task list.

[0212] After constructing the list of task detail definitions for all required tasks, the task override information is applied. This is accomplished by iterating through each task on the output task list, and looking up the task override information for the lender specified in the request. If a task override structure is present in the table, then the program loops through each element in the override structure task definition and replaces the corresponding element in the output task definition. For example, if the override task structure includes a lender-provided task description, then the value of that description is copied over the top of the more generic description from the original rules structure.

[0213] Exemplary Task List

[0214] An exemplary task list generated by the Compliance Engine in a preferred embodiment is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<rules>
  <contexts>
    <context>
      <id>1</id>
      <name>all loans</name>
      <if>true</if>
      <then>
    <taskName>GFE</taskName>
    <taskName>Transfer of Servicing Disclosure</taskName>
    <taskName>ELN</taskName>
    <taskName>ECOA</taskName>
    <taskName>Flood Insurance Disclosure</taskName>
      </then>
      <phase />
    </context>
    <context>
      <id>37</id>
      <name>Wyoming</name>
      <if>state ('WY')</if>
      <then>
    <taskName>TIL</taskName>
    <taskName>URLA</taskName>
    <taskName>Right to Receive Appraisal Disclosure</taskName>
    <taskName>Finance/Lock-in Disclosure</taskName>
      </then>
  </context>
  <context>
    <id>12</id>
    <name>Texas</name>
    <if>val('loan.property.address.state') == 'TX'</if>
    <then>
  <taskName>TX Mortgage Broker/Loan Officer Disclosure</taskName>
  <taskName>Property Disclosure--Seller to Buyer</taskName>
  <taskName>TIL</taskName>
  <taskName>URLA</taskName>
  <taskName>Right to Receive Appraisal Disclosure</taskName>
  <taskName>TX Residential Construction Contract
Disclosure</taskName>
    </then>
  </context>
  <context>
    <id>103</id>
    <name>Texas and Loan Amount > 50000</name>
    <if>((val('loan.property.address.state') == 'TX') &
(val('loan.loanAmount') > 50000))</if>
    <then>
  <taskName>TX Commitment/Lock-in Disclosure</taskName>
    </then>
  </context>
```

-continued

```
</contexts>
<operations>
    <task>
        <id>56</id>
        <name>TX Commitment/Lock-in Disclosure</name>
        <description>The borrower must receive n Commitment/Lock-in
Disclosure form.</description>
        <form>http://forms.onePipeline.com/TX__Commitment__Lock-
in__Disclosure.pdf</form>
        <role>originator</role>
        <feePercent>15</feePercent>
    </task>
    <task>
        <id>3</id>
        <name>TIL</name>
        <description>The borrower must receive the Truth In Lending
disclosure.</description>
        <form></form>
        <feePercent>15</feePercent>
        <role>originator</role>
    </task>
    <task>
        <id>1</id>
        <name>URLA</name>
        <description>The borrower(s) must sign and return the
completed Uniform Residential Loan Application.</description>
        <form>http://forms.onePipeline.com/FNMA__1003.pdf</form>
        <role>originator</role>
        <feePercent>10</feePercent>
    </task>
    <task>
        <id>2</id>
        <name>GFE</name>
        <description>The borrower must receive the Good Faith
Estimate.</description>
    <form>http://forms.onePipeline.com/Good__Faith__Estimate.pdf</form>
        <feePercent>10</feePercent>
        <role>originator</role>
    </task>
    <task>
        <id>4</id>
        <name>Transfer of Servicing Disclosure</name>
        <description>The borrower must complete, sign, and return
the Transfer of Servicing Disclosure Statement prior to
closing.</description>
    <form>http://forms.onePipeline.com/Servicing__Disclosure__552R.pdf</
form>
        <role>originator</role>
        <feePercent>5</feePercent>
    </task>
    <task>
        <id>6</id>
        <name>FLN</name>
        <description>The borrower must receive the Fair Lending
Notice.</description>
    <form>http://forms.onePipeline.com/Fair__Lending__Notice.pdf</form>
        <feePercent>5</feePercent>
        <role>originator</role>
    </task>
    <task>
        <id>7</id>
        <name>ECOA</name>
        <description>The borrower must receive the Equal Credit
Opportunity Act disclosure.</description>
    <form>http://forms.onePipelinecom/Equal__Credit__Opportunity__Act__Di
sclosure.pdf</form>
        <feePercent>5</feePercent>
        <role>originator</role>
    </task>
    <task>
        <id>8</id>
        <name>Flood Insurance Disclosure</name>
        <description>The borrower must receive the Flood Insurance
Disclosure.</description>
    <form>http://forms.onePipeline.com/Flood__Insurance__Disclosure.pdf<
/form>
```

-continued

```
        <role>originator</role>
        <feePercent>10</feePercent>
        <originatorDays>30</originatorDays>
      </task>
      <task>
        <id>5</id>
        <name>Right to Receive Appraisal Disclosure</name>
        <description>The borrower must receive the Right to Receive
Appraisal Disclosure.</description>
        <form>http://forms.oneFipeline.com/Right__To__Receive__Appraisal.pdf<
/form>
        <role>originator</role>
        <feePercent>0</feePercent>
      </task>
      <task>
        <id>10</id>
        <name>Finance/Lock-in Disclosure</name>
        <description>The borrower must receive the Finance/Lock-in
Disclosure.</description>
        <form>http://forms.oneFipeline.com/Finance__Lock__in__Disclosure.pdf<
/form>
        <role>originator</role>
        <feePercent>0</feePercent>
      </task>
      <task>
        <id>55</id>
        <name>TX Mortgage Broker/Loan Officer Disclosure</name>
        <description>The borrower must receive a Mortgage
Broker/Loan Officer Disclosure.</description>
        <form>http://forms.oneFipeline.com/TX__Mortgage__Broker__Loan__Officer
__Disclosure__10487TX.pdf</form>
        <feePercent>5</feePercent>
        <role />
      </task>
      <task>
        <id>54</id>
        <name>Property Disclosure--Seller to Buyer</name>
        <description>The property disclosure must be completed and
kept with loan documents.</description>
        <form>http://forms.oneFipeline.com/Property Disclosure Seller to B
uyer.pdf</form>
        <role>originator</role>
        <feePercent>0</feePercent>
      </task>
      <task>
        <id>211</id>
        <name>TX Residential Construction Contract Disclosure</name>
        <description>The borrower must receive the TX Residential
Construction Contract Disclosure, which is to be provided by the
contractor for new construction.</description>
        <form>http://forms.oneFipeline.com/TX__Residential__Construction__Con
tract__Disclosure.pdf</form>
        <role>originator</role>
        <feePercent>0</feePercent>
      </task>
    </operations>
  </rules>
  <overrides>
    <tasks>
      <task>
        <name>TX Mortgage Broker/Loan Officer Disclosure</name>
        <description>Execute ABC Company Loan Officer
Disclosure.</description>
        <form>http://forms.ABC.com/ABC__Loan__Officer__Disclosure.pdf</form>
        <role>Loan Originator</role>
      </task>
      <task>
        <name>TX Residential Construction Contract Disclosure</name>
        <description>The borrower must receive the ABC Company
Residential Construction Contract Disclosure.</description>
        <form>http://forms.ABC.com/ABC__Residential__Construction__Contract__D
isclosure.pdf</form>
      </task>
    </tasks>
      </override>
```

[0215] In a preferred embodiment, the original compliance task list for a specific loan is transmitted to the lender for Compliance Management or passed to an automated workflow engine to initiate the dynamic workflow process. FIGS. **37-41** contain a set of system screen shots showing an exemplary list of tasks required to complete a sample loan.

[0216] An Alternative Embodiment

[0217] In an alternative embodiment, a more general compliance system may be used, and is now described with reference to FIG. **5**. Referring now to FIG. **5**, the 'Originator and Processor Compliance Engine'**520** is comprised of two principle elements—the 'Worker Description'**521** and the 'Legal Context'**523**. These elements are described in their preferred embodiments as follows:

[0218] The 'Worker Description'**521** comprises an assemblage of data sources which define the types **525**, roles **527** and locations **529** of the workers or agents which may participate in the mortgage origination process. The participation decision for a worker or agent is based upon the combination of features which the worker embodies and which make them unique when combined one with another. In the preferred embodiment, the worker provides a data profile representative of the worker's type—that is, the type of service the worker may provide. The worker is typically representative of only one 'type' for example, either a 'Real estate sales professional', 'mortgage broker', 'banker', etc.. The specific 'role(s)' that a particular worker or agent has in the process is/are also defined. The 'role(s)' that a worker assumes are aligned with the tasks requiring completion which a worker of that type can legitimately perform, according to the governing rule base for that specific worker type. These 'roles' may include such tasks as surveys, inspections, credit worthiness checks, employment verification, etc.. Orchestrating the interrelationship of these information sources is a 'Role Sequencing' definition or data table which assures a meaningful, orderly, and legal application of the available data. Those skilled in these arts will understand that various methods similar to those described above in a preferred embodiment could be used for such sequencing activities. In an exemplary process the data passed from the Authentication module includes the loan originator used ID. This user ID is used as an argument to find the recorded worker type in the Worker's description databases where a user ID **1**, for example, would produce a Type ID1. This type ID1 would then be used to find the corresponding roles for this type of user and to determine the locations where this user id is licensed/qualified to do business. These data are written into a 'worker's profile' structure.

[0219] Referring again to FIG. **5**, the 'Legal Context'**523** could comprise an assemblage of data sources which would contain the regulatory elements pertinent to the compliance and underwriting process as required by the 'Originator and Processor Compliance Engine'**520**. Included in this element would be tables and other data sources which are typically comprised of state and county regulations **531** similar to those described above with reference to the preferred embodiment, licensing regulations **533**, federal regulations **535**, and professional organizational rules **539**, all of which may govern or otherwise influence the underwriting process. Orchestrating the interrelationship of these information sources would be a 'Rule Sequencing' engine **541** which assures a meaningful, orderly, and legal application of the available data. When the 'Role Sequencing' data table and 'Rule Sequencing'**541** engines have completed the required processing, a profile **543** or a composite of the borrower requirements and property profile with applicable worker attributes is made available to the other modules as required (i.e. the Authentication module, Loan Origination module, workflow engine, and Task maintenance & status reporting gateway module).

[0220] The 'Loan Application & Program Matching System'

[0221] Referring again to FIG. **4**C, the 'Loan Origination & Program Matching System'**456**, (also see **505** in FIG. **5**) is comprised of a multiplicity of sub-systems, to be later described. After this loan originator has been 'authenticated' as described above, this system serves as an infrastructure to identify various loan products or instruments suitable for this unique combination of borrower and property, and further offering a preferred recommendation of loan products and participating workers or agents to effect the loan. The system communicates with the loan originator and requires him to complete the actions and provide the additional borrower data and instructions shown in FIGS. **12-17**.

[0222] As indicated above, in the preferred embodiment of the invention, this Loan Application & Program Matching System' is preferably performed by a system such as GHR Systems™ making use of their PremierWare™ product. This GHR product is also an object oriented product, however the objects employed are Microsoft COM™ objects which require Windows NT™. The web server architecture of applicants system is UNIX based which necessitates using Java and the Common Object Request Broker (CORBA) system to communicate between the UNIX and COM based object systems. The architecture of this communications interface is described below with reference to FIG. **34**.

[0223] With reference to Applicants's use of this PremierWare™ product, the following description pertains. The input and output data elements that play a role in Applicant's use of the GHR Underwriting Framework known as PremierWare are now described. Applicants implemented the framework within a distributed architecture encompassing several technologies including Java, CORBA, COM, and Delphi (Object Pascal). First, how the GHR components interact with each other are described, followed by the Applicants implementation around that interaction.

[0224] GHR Systems' PremierWare framework is a set of software components that adhere to the component object model (COM) sponsored by Microsoft, Inc. The framework is provided to facilitate the qualification of borrower credentials, i.e., income, debts, etc., against mortgage loan programs. The desired result being to locate a loan program for which the borrower is qualified. The framework is functionally divided internally representative of three primary operations:

- [0225] Product Filtration: Narrowing the number of programs available for qualification processing.
- [0226] Qualification: Extracting the programs for which the borrower is qualified to apply.
- [0227] Ancillary Utilities (Helping): Packaging and unpacking data as it moves in and out of the GHR API.

[0228] Product Filteration

[0229] If no product filtering is performed before qualification, then qualification processing is completed on all products in the GHR products database. Filter criteria can be set using any or all of the data elements below:

GHR Term	Date Type
LenderID	String (butt)
MaxReturnedProducts	Integer
MoObits	Integer
PropertyState	String i.e., UT
PropertyCounty	String
PropertyZip	String
LockType	Integer
LockDays	Integer
PricePreference	Integer
SpecificRate	Integer
SpecificPoints	Integer
AllLoans	Boolean
FHALoans	Boolean
VALoans	Boolean
ConventionalLoans	Boolean
FixedRateMortgages	Boolean
AdjustableMortgages	Boolean
BalloonMortgages	Boolean

[0230] The result of a Product Filtering operation is a set of loan programs that serve as the input to a Qualification operation. Within the framework, the Pricer object's GetProductsForQualification method is used to perform a filtering operation. Once a set of loan programs is received from GetProductsForQualification, then qualification can commence.

[0231] Qualification

[0232] The first step in qualification is selecting a Qualification Method. There are fourteen methods in total, which are grouped into four Modes. The four Modes are:

[0233] Buyer/Purchase

[0234] Cash out Refinance

[0235] No Cash out Refinance

[0236] Shopper

[0237] The methods of Qualification are listed below by Mode:

BuyerPurchase	Cash out Refinance	No Cash out Refinance	Shopper
BuyerBaseLoan	CashoutRefiMaxCashout	NoCashRefiInclFee	Shopper
BuyerAvailableCash	CashoutRefiSpecifyCashout	NoCashRefiSpecifyLoan	
BuyerMaxLoan	CashoutRefiSpecifyLoanAmt	NoCashRefiSpecifyLTV	
BuyerBaseLTV	CashoutRefiSpecifyLTV	NoCashRefiNoCostRefi	
BuyerDesiredPITI			

[0238] The grids below and on the following pages outline these modes and the various methods available in each Mode with each method's input parameters. There is a core set of input parameters that are used for all methods, and then under each method, there are one or more variations that are indicated in context.

Buyer/Purchase Mode
BuyerBaseLoan Qualification Method
Qualifies a borrower for a specific property (i.e. sale price is known).

GHR Term	Date Type
ProgramID	String
PGC (Product Group Code)	String
RequestedRate	Integer 8125=8.125 %
RequestedPoints	Integer 1250=1.250 pts
RequestedCeiling	Integer 8125=8.125 %
RequestedMargin	Integer 8125=8.125 %
BaseLoan	Integer
Income	Integer
MonthlyDebt	Integer
CurrentHsgExpense	Integer
YearsExpectedInHouse	Integer
EstimatedCloseDate	String
IgnoreIncomeRatios	Boolean
OverrideRatios	Boolean
FrontRatioOverride	Boolean
BackRatioOverride	Boolean
EstimatedTaxDollars	Integer
EstimatedHazInsDollars	Integer
VASkirts	Integer
AssociationFee	Integer
FICOScore	Integer
FICORejectCode1	String
FICORejectCode2	String
FICORejectCode3	String
State	String
County	String
Zip	String
MoObits	Integer
SalePrice	Integer

Buyer/Purchase Mode
BuyerAvailableCash Qualification Method
Qualifies a borrower based on his/her cash available for closing.
All items are the same as the BuyerBaseLoan except 'BaseLoan' is replaced by 'AvailableCash'.

GHR Term	Date Type
AvailableCash	Integer

Buyer/Purchase Mode
BuyerMaxLoan Qualification Method

-continued

Qualifies a borrower for the maximum loan amount.
All Properties are the same as the BuyerBaseLoan except BaseLoan is removed.

-continued

Buyer/Purchase Mode
BuyerBaseLTV Qualification Method
Qualifies a borrower based on the percentage of downlood payment.
All Properties are the same as the BuyerBaseLoan except BaseLoan is replaced by BaseLTV.

GHR Term	Date Type
BaseLTV	Integer

Buyer/Purchase Mode
BuyerDesiredPITI Qualification Method
Qualifies a borrower based on his/her desired monthly combined principle, interest, taxes, and insurance payment.
All Properties are the same as the BuyerBaseLoan except BaseLoan is replaced by DesiredPITI.

GHR Term	Date Type
DesiredPITI	Integer

Shopper Mode
Shopper Qualification Method
Qualifies a borrower who is shopping for a house and does not have a specific property. Also known as "affordability analysis."
All Properties are the same as the BuyerBaseLoan except.
BaseLoan is removed but MaxLTV, MaxPITI, and AvailableCash are added as well as two percentage fields: EstimatedTaxesPercent and EstimatedHazInsPercent, and a MaxPointsAsGift field.

GHR Term	Date Type
AvailableCash	Integer
MaxPITI	Integer
MaxLTV	Integer
EstimatedTaxesPercent	Integer
EstimatedHazInsPercent	Integer
MaxPointsAsGift	Integer

No Cash Out Refi Mode
NoCashRefiInclFee Qualification Method
Qualifies a borrower with a loan amount that includes the original mortgage balance and closing costs.

GHR Term	Date Type	
ProgramID	String	Defined in Buyer Mode
PGC	String	Defined in Buyer Mode
RequestedRate	Integer	Defined in Buyer Mode
RequestedPoints	Integer	Defined in Buyer Mode
RequestedCeiling	Integer	Defined in Buyer Mode
RequestedMargin	Integer	Defined in Buyer Mode
Income	Integer	Defined in Buyer Mode
MonthlyDebt	Integer	Defined in Buyer Mode
CurrentHsgExpense	Integer	Defined in Buyer Mode
YearsExpectedInHouse	Integer	Defined in Buyer Mode
EstimatedCloseDate	String	Defined in Buyer Mode
IgnoreIncomeRatios	Boolean	Defined in Buyer Mode
OverrideRatios	Boolean	Defined in Buyer Mode
FrontRatioOverride	Boolean	Defined in Buyer Mode
BackRatioOverride	Boolean	Defined

-continued

		in Buyer Mode
EstimatedTaxDollars	Integer	Defined in Buyer Mode
EstimatedHazInsDollars	Integer	Defined in Buyer Mode
VAStatus	Integer	Defined in Buyer Mode
AssociationFee	Integer	Defined in Buyer Mode
FICOScore	Integer	Defined in Buyer Mode
FICORejectCode1	String	Defined in Buyer Mode
FICORejectCode2	String	Defined in Buyer Mode
FICORejectCode3	String	Defined in Buyer Mode
CurrentMtgBalance1	Integer	
CurrentMtgBalance2	Integer	
CurrentMtgBalance3	Integer	
CurrentMtgRate1	Integer	
CurrentMtgRate2	Integer	
CurrentMtgRate3	Integer	
CurrentMtgPITI1	Integer	
CurrentMtgPITI2	Integer	
CurrentMtgPITI3	Integer	
CurrentMtgRemainingTerm1	Integer	
CurrentMtgRemainingTerm2	Integer	
CurrentMtgRemainingTerm3	Integer	
CurrentMtgFLOC_2nd	Boolean	
CurrentMtgFLOC_3rd	Boolean	
CurrentMtgToBePaidOff1	Boolean	
CurrentMtgToBePaidOff2	Boolean	
CurrentMtgToBePaidOff3	Boolean	
InvestmentRate	Integer	
OrigLastWithdrawal 2nd	String	
OrigLastWithdrawal 3rd	String	
State	String	Defined in Buyer Mode
County	String	Defined in Buyer Mode
Zip	String	Defined in Buyer Mode
MsaInfo	Integer	Defined in Buyer Mode
SalePrice	Integer	Defined in Buyer Mode

No Cash Out Refi Mode
NoCashRefiSpecifyLoan Qualification Method
Qualifies a borrower with a specified refinance loan amount.
All properties from NoCashRefIncludeFee remain in addition to BaseLoan.

GHR Term	Date Type
BaseLoan	Integer

No Cash Out Refi Mode
NoCashRefiSpecifyLTV Qualification Method
Qualifies a borrower with a specified percentage of existing loan balance.
All properties from NoCashRefIncludeFee remain in addition to BaseLTV.

GHR Term	Date Type
BaseLTV	Integer

No Cash Out Refi Mode

-continued

NoCashRefiNoCost Qualification Method Qualifies a borrower with a rate points combination that allows the closing cost to be insulated from the borrower. In general, negative points are owned to provide "cash-back" to the borrower, which is applied toward closing costs. All properties from NoCashRefiIncludeFee remain in addition to BaseLoan.	
GHR Term	Date Type
BaseLoan	Integer
Cash Out Refi Mode	
CashoutRefiMaxCashout Qualification Method Qualifies a borrower with the maximum possible cash out amount. Properties are the same as the NoCashRefiIncludeFee qualification method.	
Cash Out Refi Mode CashoutRefiSpecifyCashout Qualification Method Qualifies a borrower with an amount that will pay off the existing loan balance with a specified cash out to the borrower at closing. Properties are the same as the NoCashRefiIncludeFee qualification method plus an AvailableCash field.	
GHR Term	Date Type
AvailableCash	Integer
Cash Out Refi Mode CashoutRefiSpecifyLoanAmount Qualification Method Qualifies a borrower with a specified loan amount and cash out amount. Properties are the same as the NoCashRefiIncludeFee qualification method plus AvailableCash and BaseLoan fields.	
GHR Term	Date Type
AvailableCash BaseLoan	Integer Integer
Cash Out Refi Mode CashoutRefiSpecifyLTV Qualification Method Qualifies a borrower with a specified loan to value ratio. Example: 70% LTV for an existing loan balance of $70,000 will result in a loan amount of $100,000. Properties are the same as the NoCashRefiIncludeFee qualification method plus AvailableCash and BaseLTV fields.	
GHR Term	Date Type
AvailableCash BaseLTV	Integer Integer

[0239] Credit Profile Inputs

[0240] Each of the qualification methods also accept two input arrays for specifying aspects of the borrower's credit profile. These elements improve the accuracy of the Qualification Results. A Credit Report is retrieved electronically from a certified credit-reporting agency and prepared for use by the GHR interfaces. The two array elements are:

[0241] Liabilities

[0242] Public Records

[0243] The data elements for setting these arrays are provided below:

[0244] Liabilities

[0245] SetNumberOfRecords(Integer);

[0246] BorrowerNumber

[0247] LateDaysLiabilityTypeMonthsFromDateReported

[0248] Public Records

[0249] SetNumberOfRecords(Integer);

[0250] BorrowerNumber

[0251] MonthsRecordClosed

[0252] MonthsRecordOpened

[0253] RecordType

[0254] Amount

[0255] GHR Qualification Results

[0256] Two sets of records are returned from each qualification request. A set of products (Loan Programs) and a corresponding set of closing costs. There is a one-to-many relationship from each Loan Program to the array of Closing Cost Records. The layout of these fields is depicted below:

GHR Term	Date Type
PreQualOutput Record (Loan Programs)	
RejectionFlags	Integer
TotalLoanAmount	Integer
BaseLoanAmount	Integer
SalePrice	Integer
ClosingCosts	Integer
StartingPITI	Integer
APR	Integer
ReturnRate	Integer
SimLTVPointsAdjustment	Integer
Factor	Integer
HER	Integer
TER	Integer
LTV	Integer
PI	Integer
MI	Integer
Taxes	Integer
Hazins	Integer
RequiredCash	Integer
PITIInCash	Boolean
PITIReserves	Integer
OriginationFee	Integer
UpfrontMI	Integer
MIFinanced	Boolean
TBDFee	Integer
QualRate	Integer
Arm	Boolean
Index	Integer
Margin	Integer
Cap	Integer
Ceiling	Integer
ClosingCostsUsed	Integer
Term	Integer
BreakEvenMonthNoReinvest	Integer
BreakEvenMonthReinvest WC	Integer
BreakEvenMonthNoReinvestWC	Integer
BreakEvenMonthReinvest WC	Integer
AIR	Integer
ARMIndex	String
Prequid	Integer

-continued

GHR Term	Data Type
Mixpboob	Boolean
MiKenewal1	Float
CashFinanceDMI	Float
ProgrmmID	String
PGC	String
RetumPoints	Integer
Closing Cost Record	
ComputeImpounds	Boolean
Apr	Boolean
PaidOutsideClosing	Boolean
VRAAllowable	Boolean
AppliesToMode	Boolean
Financed	Boolean
Points	Boolean
InitialPremiumFinanced	Boolean
State	String
County	String
FromZip	String
ToZip	String
MortgageType	String
Description	String
Type	String
TableId	String
Name	String
PerUnitAmount	Float
Percent	Float
Fee	Float
Seller	Float
Lender	Float
Rate	Float
InitialPremium	Float
RenewalPremium	Float
Premium	Float
BuyerID	Integer
Mods	Integer
HUDNumber	Integer
ImpoundType	Integer
Unit	Integer
MonthsToEscrow	Integer
AssocHUD	Integer

[0257] Applicants Implementation

[0258] In Applicant's architecture, the GHR components are wrapped with a CORBA interface using Borland's Delphi development tool (Object Pascal). This interface exposes a single method 'Qualify' that accepts five input parameters:

[0259] Qualification Method

[0260] Filter Parameters

[0261] Qualifications (Borrower Data)

[0262] Borrower Liability Data (From Credit Report)

[0263] Borrower Public Record Data (From Credit Report)

[0264] With the exception of 'Mode', which is an integer value, all the other parameters are Strings. The Strings are formatted (delimited) with structures to be easily disassembled for use against the GHR COM interfaces. The format makes use of industry standards such as XML and XMLT. Data is sent to and from the CORBA interfaces utilizing IIOP over TCP/IP.

[0265] Any CORBA client can tie directly into the GHR CORBA server once the input parameters are satisfied. In our implementation, a set of JavaBeans comprise the client side of our architecture. There is a JavaBean representing each of the Qualification Methods expressed by GHR. The JavaBeans expose mutater methods for setting each element of the input parameters for Filter Parameters, Borrower Liability Data, Borrower Public Record Data, and Qualifications. The Qualification Mode is encapsulated within the JavaBean corresponding to the GHR qualification method. All of the JavaBeans expose a Qualify() method through inheritance that performs all of the CORBA location and marshalling functions necessary to interact with the GHR CORBA Server. The result of the Qualify() method call is a delimited String representing the 'PreQualOutput Records' and 'Closing Cost Records' described above. Navigating the output is facilitated by a special IqualifiedProducts JavaBean which receives the formatted return String, parses the records, and exposes methods for accessing individual elements of semantic importance as also outlined in Qualification Results section above. These JavaBeans are dependent on the visibility of the GHR CORBA Server via an IIOP channel and are not well suited for integration with the outside world.

[0266] To expose the functionality of the Qualification features of the Applicants system to the outside world, the JavaBeans encapsulation of the GHR CORBA Server's API is further abstracted to facilitate clients via the HTTP protocol. A Java enabled HTTP server is positioned to intercept function calls via the outside world and pass them into the JavaBeans which in turn make their normal CORBA requests to the GHR CORBA Server.

[0267] Referring now to **34**, with reference to the descriptions above, this Applicants-GHR Systems communications interface is defined in functional overview. An HTTP server receives inputs from applicants' system, wherein requests for data are processed and an instantiation of a GHR client JavaBean occurs based on type of qualification desired **3503**. These GHR JavaBeans provide an API into the GHR CORBA Server using distributed computing data marshalling over the Internet Inter-ORB Protocol (IIOP) **3505**. The IIOP request is transmitted to a GHR CORBA server **3509** where the data from the client JavaBeans are accepted, unmarshalled and used to trigger the instantiation of the GHR Systems COM objects. The GHR system using its COM objects, processes the request and returns qualified loan programs (if any). These data are formatted into an XML data stream and sent back to the client JavaBean. **3511**. The Applicants system code receiving the XML datastream, parses the datastream and creates an HTML document for return to the calling web browser for end-used interaction.

[0268] In an alternative embodiment, subprograms for performing the functions equivalent to those of the GHR system would be developed internally to applicants system.

[0269] The 'Originator Task Menu and Origination Fee Assessment' Function

[0270] As indicated above, upon completion of the loan selection and formal loan request, the loan originator is given the screen shown in **FIG. 28A** and is asked to specify the loan origination fee and to choose the functions in steps **3**, **4** and **5** which the loan originator will do. The 'Originator Task Menu and Origination Fee Assessment' function **519** in **FIG. 5** uses these selections as well as the other non-selected required tasks to construct the inputs which are passed to the Compliance Engine as described above.

[0271] The 'Loan Fulfillment Workflow Process'

[0272] The composite of information which is passed to the 'Loan Fulfillment Workflow Engine'**545** in **FIG. 5** as a new 'context' or data embodiment, and by which a new, discrete, mortgage process is created comprises the summation of data or information supplied by the 'Compliance Engine'**520**, the list of tasks related to the specific loan as described above. In a preferred embodiment, the list of tasks for the specific loan are delivered by the Compliance Engine to the Loan Fulfillment System (**462** in **FIG. 4C**) which comprises a Loan Processing and Mortgage Workflow Engine such as Framework, Inc.'s Lendware™ product. In an alternate embodiment the 'Loan Fulfillment Workflow Engine'**545** in **FIG. 5** is contained within applicants' system and would be built around the Sun Microsystems™ Inc. Forte™ Conductor™ engine product to manage and control the related business processes and to provide a runtime shell to facilitate coordination of application services within the business process. The various business applications related to the steps to be processed in completing the mortgage loan closing are pre-defined to the Forte Conductor system Osai as they are in the Lendware product) so that when the 'mortgage functions' and their designated 'actioneer' (if any) are passed to the 'Loan Fulfillment Workflow Engine' and to its Forte Conductor engine, these 'functions' are executed in an integrated environment where both the function process definition and each of the supporting applications is pre-defined and will execute automatically. The supporting applications are a set of application proxies, each representing the business service provided by its application and the pre-defined actions to take are contained in an XSL rule base, consisting of rule documents. Specific rule documents are assigned to proxies so they can interpret and transform messages The 'Loan Fulfillment Workflow Engine'**545** and its Forte Conductor engine assures that processes happen in the correct sequence and in accordance with the (software controlled) pre-determined, programmatic branching conditions defined by the 'Worker Profile Attributes'**543** business process definition. The 'Loan Fulfillment Workflow Engine'**545** may call upon any combination of 'workers', heretofore described as computers, data tables, software, persons, organizations, companies, or other data sources, etc. to perform the required tasks. The 'worker' or 'agent' is typically manifested in one or more of the following ways: as an individual, an organization, one or more data tables, a data processing system, or the like.

[0273] In this alternative embodiment the pre-programmed functional steps executed by the Forte Conductor system are shown in **FIG. 6**. The types of activities represented by the icons on **FIG. 6** include the following;

Icon	Description
Opening door	Beginning of a new process, in this case a new loan
Closing door	Ending of a process
Computer	Automated activity that does not require human interaction
Monitor interaction	Manual or partly manual activity requiring human
Alarm Clock passage of time	Timer activity which initiates the next activity based on

[0274] The process definition drawing shown in **FIG. 6** defines the process activities for the Applicants.com compliance workflow system. By performing the defined activities under the strict control of the Conductor workflow engine, the engine ensures that all required tasks are completed, and in the required sequence. The engine presents activities only to workers whose role designations match the role designations of the activity. The earlier system activities assigns roles in advance to workers only after verifying that the pre-requisite qualifications are satisfied. In this fashion, loan originators are assured that all applicable pre-qualifications are satisfied and that they actually performed all the services for which they were compensated. When a loan process is initiated in the workflow system a call is made to the Forte Conductor software to instantiate a new loan workflow process for the specific loan, as indicated by the parameters passed in the calling sequence.

[0275] This workflow process is better understood with reference to **FIG. 6**. Referring now to **FIG. 6** , the loan originator **601** gathers credit data, gets authorization and requests pull credit **603**. The automated system **607** pulls credit **609**, processes the credit report, parses FICO, public records and liabilities **611**, and the credit profile is saved to the Oracle™ data base **612**. If this credit clearing process exceeds 15 minutes a timeout occurs **615** and a message is sent to the user indicating a failure in the credit processing. When the credit profile is completed and saved to the Oracle™ data base **612** and the loan originator **601** has completed the loan wizard and Express app via the website **604** the system then begins the underwriting assessment **617**. If the FICO previously determined in step **611** is not less than 620 the process driver submits the request to automated underwriting **621**. If it is approved **623** the system generates task lists and compliance documents (GFE, TIL, Disclosures, etc.) **625** and submits them, to the loan originator **627**, to the premium broker processor **649**, to the premium broker account executive **651**, for their individual completion of their respective tasks to complete the loan process. The loan originator **627**, the premium broker processor **649**, and the premium broker account executive **651**, all electronically submit a task completion message to the system **631** and it compares the submissions against authorization criteria **633**. If the criteria are met the system determines whether the user has requested that the loan rate be locked **635** and if so the loan is locked-in with the investor **661** and a message is passed to the clear-to-close auditor **665**, **659** where a determination is made as to whether the transaction is clear-to-close **667**. If so a message is passed to the closer **669** to close the loan **677**. A message is then passed to the funder/shipper **671** to fund/ship the loan. The funder/shipper **671** does two things: first it verifies the investor purchase of the loan **683** and notifies the controller **675** to update the general ledger that funds have been received **689** and tells the end transaction mechanism **691**; secondly the funder/shipper **671** tells the controller **675** to update the General Ledger to disburse the funds **687** which submits a requisition to payroll **685** who notifies the end transaction mechanism **691**.

[0276] The system has capabilities to determine that the required criteria have not been met/completed **633** and determine whether to resubmit the loan request to automated underwriting **639**, **640** or to notify the underwriter **641** to

iterate on the credentials review process **643** and either deny **645**, **647** the loan or approve it **645**, **623** and generate the task lists again **625**.

[0277] Thus the loan process in this alternate embodiment is driven through the required tasks by the Forte Conductor engine to assist in the complying with the various regulations and yet automate the process in a helpful and efficient manner. In the preferred embodiment the ASP system LendWare or its equivalent drives the loan process and the individual task workers in a manner similar to that described above. In the preferred embodiment the task completion data is passed to the Compliance Engine which monitors the list of tasks for each loan and which can also communicate directly with some task workers when certain critical events occur or timeouts are perceived.

[0278] The 'Task List Maintenance and Status Reporting Gateway"

[0279] The 'Task List Maintenance and Status Reporting Gateway"**550** in **FIG. 5** or **463** in **FIG. 4C** serves as a portal to communicate to and from other agents and workers who are qualified to perform assigned tasks. These tasks are those which would be assigned by the 'Loan Fulfillment Workflow Engine'**545** or by the ASP workflow processor Lendware **463** to other agents or workers to complete prior to the closing of the loan and distribution of funds. While this gateway is similar to the 'loan origination gateway' it is significantly different in that the middleware layer must handle the conversion of data format and protocol of the Forte Conductor engine or the Lendware workflow engine to and from the formats and protocols of the agents/workers to which the workflow process is communicating. Accordingly, The 'Task List Maintenance and Status Reporting Gateway'**550** in **FIG. 5** is used to transmit messages from the workflow engine to these other agents and to receive responses from authenticated agents. These agents would be performing tasks such as 'title search', 'survey', 'credit check', etc. The 'Task List Maintenance API and Status Reporting Gateway'**550** can also use the same interface modes as envisioned for The 'Loan Origination Gateway'**505**. Envisioned are at least three (3) ways by which the system may access and be accessed by a loan agent/worker: (1) via Internet website, (2) via custom-written software which connects in a data transmission-enabled manner to the present invention, and (3) via 'wireless' devices, as previously described for the 'Loan Origination Gateway'**505**.

[0280] A loan originator or borrower may also come into the system via this gateway to check the status of the loan process, etc. As indicated below every entrant via this gateway must never-the-less be authenticated before entry is allowed. Conveyance of task lists to a loan originator and associated workers and reporting of borrower loan status are accomplished through a programmatic presentation **552** which embodies the following: 'borrower status report(s)', 'originator's task list', and 'other worker's task lists' (as described above)—said information exchanged through this 'task maintenance & status reporting Gateway' (the "TMSR gateway"). This 'TMSR gateway', functions in a manner similar to that used during the loan origination process. Reports may be conveyed by a variety of programmatically controlled means, such as web pages, PDF® files, word processing format files, etc. The TMSR gateway receives the direction messages from the 'Loan Fulfillment Workflow Engine'**553** in the standard Forte Conductor or Lendware API format, and using the middleware layer described before, converts the format and message protocol into that required to communicate with the desired agent/worker. Similarly, the TMSR gateway can receive messages from the various agents/workers in various formats and protocols (i.e. HTML, XML, WML, WAP, etc.) and converts these messages and protocols into the standard API formats used in the preferred embodiment.

[0281] Referring now to **FIG. 36** the principle purpose of the 'TMSR Gateway'**4200**, in serving as a portal, is to provide a way for the loan originator and borrower to check the status of the loan process and for the 'loan process workflow engine' to communicate to and from the other agents/workers who are doing some task required by the process, without having to worry about what input method or output method is required to communicate with a given entity, and/or the related data formats and protocols. Consequently the major purpose of the TMSR gateway is to perform the middleware tasks of—recognizing the input channel and data format and protocol used **4209** and convert the data to the standard workflow engine Application Programming Interface (API) format **4211** which will be used by the workflow engine. Similarly, on receiving a message to be transmitted from the workflow engine, the TMSR gateway middleware structure is required to determine the format & protocol used by the addressee and convert the message from the workflow engine API format into the format and protocol of the addressee **4215** and then transmit the message **4217** to the addressee **4203** or **4205** or **4207**. The input data originates from the input screens provided by the system, and from the output data pre-defined in the various task elements in a typical loan workflow process. The workflow engine will typically transmit a required message whenever an event occurs which requires a message be sent or resent (because of a timeout for example).

[0282] The TMSR gateway is required to pass the received data to a second authentication module **549** in **FIG. 5** or **464** in **FIG. 4C**. This authentication module once again verifies the used ID and password of the inputting user. In the preferred embodiment this check does not verify the legal qualifications of the user. In an alternative embodiment, the user ID is checked to determine the worker Type, and the roles this type worker may perform for this location of the property and for his location are verified against the role he is attempting to play. Similarly the compliance engine checks to see if the various legal regulations allow this agent/worker to perform the role they are attempting to play. If so the authentication module **4212** in **FIG. 36** will pass the data submitted to the aforementioned workflow engine **4213** for its processing of the incoming data in response to the task assigned.

[0283] Transaction Service Provider Gateway

[0284] Returning now to **FIGS. 4C** and **5**, the 'Vendor Management API Gateway **467** in **FIG. 4C** or the 'Transaction Service Provider Gateway'**555** in **FIG. 5** serves to manage 'tasks' assigned to external agents or workers or vendors with whom Applicants' have a special vendor relationship. That is, a vendor who supplies appraisals in a given locality, loan processing, credit checks, title searches, flood certification, mortgage insurance, etc. The 'Vendor

management API Gateway' or the 'Loan Fulfillment Workflow Engine', (see **FIG. 6** for example) in developing a task list for the loan originator (**627** in **FIG. 6**), recognizes some tasks as falling under the responsibility of the loan originator as determined in the loan origination process, and some tasks which are to be automatically forwarded to certain service provider agents or vendors. The communication of these assignments, occurs in a different manner than those described above relative to the TMSR gateway. Since these tasks tend to be more routine and repetitively performed by the specific vendors, the workflow engine will send a message to the designated vendor and wait (i.e. maintain the telephonic or electronic connection) until the vendor supplies the desired response (which normally would be within a few minutes) or until a watchdog timer expires. If the timer expires the workflow engine will try the communications again as well as notify a system manager that the vendor has not responded.

[0285] For example referring now to **FIG. 36** the 'transaction service provider gateway' (the "TSP gateway") **4400** is described. The functioning of the 'Vendor Management API gateway' under the control of Lendware, for example, would function similarly. Whenever the workflow process for this loan **4401** recognizes an event/task which requires a communication to a vendor/partner (service provider), the workflow process constructs the message and passes it to the TSP gateway **4403**. The TSP gateway determines the format and protocol required to communicate with the indicated service provider and translates the message from the workflow process format into the required format and protocol for the service provider **4405**. The TSP gateway then establishes a persistent communications link with the service provider **4407** and sends the message and waits for a response **4409**. If the service provider does not respond in a given time a watchdog timer expires **4411**, **4413** in which case the system administrator is notified **4415** and the message is resent **4409**. If the service provider responds within the allotted time **4423**, **4425** the circuit connection is released **4427** and the response is translated from the format and protocol of the service provider into the format required by the workflow process **4429** and the response is passed back to the workflow process **4431**.

[0286] During the course of the workflow process execution of the various tasks as shown in **FIG. 6**, the workflow process engine records each transaction into an Oracle database in order to create and maintain an audit trail of tasks performed for this loan, when performed, by whom, etc. This database is used for certain reports triggered by other tasks in the workflow process as well as ad-hoc reports of tasks completed for various compliance and maintenance reasons.

[0287] Worker Compensation and Task Performance Report Module

[0288] The 'Worker Compensation and Task Performance Report' Module **468** in **FIG. 4C** or **557** in **FIG. 5**, provides a mechanism for producing reports to accounting to distribute funds to those agents/workers who have earned them in a particular loan transaction. These reports in a preferred embodiment are normally triggered by the Compliance Engine but may be triggered in an alternative embodiment by the loan workflow process for that loan at certain predefined points in the workflow. This module also provides the capability for generating regulatory completion reports and/or Completion Certificates as required for each loan.

[0289] The 'Secondary Banking Process' Module

[0290] The 'Secondary Banking Engine' module **469** in **FIG. 4C** or **561** in **FIG. 5** serves to manage loan transactions as they are introduced to the secondary lending pool, and move them programmatically through the process of 'closing', 'funding', and 'shipping' the loan transaction. In one embodiment, **469** in **FIG. 4C**, is managed by Lendware via on on-site installation or equivalently by Framework ASP. In an alternative embodiment, the secondary banking functions would be managed and processed within applicants' system.**561** in **FIG. 5**. In the alternative embodiment, the 'Secondary Banking Engine'**561** would also serve as the mechanism whereby the transactions and finds distributions involving the bundling and selling of loans to the secondary banking institutions are verified and reported in the following manner: (a) 'Locked Loan reports, tracking all loans locked by borrowers, and reported on a regular schedule, (b) Commitment report, tracking all unfulfilled loan commitments, (c) Funding report, which tracks and reports initial funding status (d) Funded, but not Shipped report, (e) Shipped but not Purchased report, and (f) Purchased Loan report.

[0291] In an alternative embodiment, a special task of the secondary banking module is to manage use of the funds in the warehouse credit line. The management objective is to optimize the financial return generated by the funds in the warehouse line of credit. If too much of the warehouse line is consumed in covering mortgage loans processed, the overall return on these funds is diminished. Accordingly the management task is to move mortgage loans from the warehouse line to secondary investors as quickly as possible. This may be done by selling individual loans to secondary investors, or by pooling multiple loans, according to various credit conditions and pooling rules for sale to other secondary investors.

DESCRIPTION OF THE BEST MODE

[0292] Referring now to FIGS. 31-32 the various types of computer hardware and computer software used in a preferred embodiment at the present time are depicted. In **FIG. 31** it is clear that Sun® Ultra5™ workstations **3101** and general purpose Personal computers (PC) **3103** may be used as input devices to the system. A Sun E250™ dual processor server **3105** is used as a development/test system running the Sun® Solaris® operating environment, Oracle® 81, Forte® Conductor™ with a SynerJ™ server. A single processor Sun E250™ server **3107** is used in the Sunnyvale facility. Also in this facility are three Sun E4500™ dual processors **3117**, **3119** and **3121**, an IBM NetFinity 7000™ quad processor with a Microsoft® NT™ server **3115** and a Hitachi Shared Disk array **3123**. There are also three IBM NetFinity 5000™ servers **3109**, **3110** and **3111** located in the Salt Lake City facility.

[0293] In **FIG. 32** it may be seen that loan originators interface to the applicants system using a standard Internet browser such as Internet Explorer™**3201** with the initial interface in applicants' system being with Lotus® Domino™**3203**. The system then performs the Pre-qualification and Loan application & Approval using GIIR® Systems PriemierWare™**3209**. The Sun Solaris® operating

environment in the system server (at **3203** in **FIG. 32**) interfaces with the GHR system **3209** and to FastDirect™**3211** via IIOP through a CORBA to COM bridge and a Delphi Automation interface to Windows NT™. Solaris™ interfaces in this configuration to the Oracle 8i® server via Forte® Conductor™**3207** through Forte Enterprise JavaBeans, Forte Distributed JavaBeans and IIOP.

[0294] Having described the invention in terms of a preferred embodiment, it will be recognized by those skilled in the art that various types of general purpose computer hardware may be substituted for the configuration described above to achieve an equivalent result. Similarly, it will be appreciated that arithmetic logic circuits are configured to perform each required means in the claims for performing the various features of the rules engine and flow management. It will be apparent to those skilled in the art that modifications and variations of the preferred embodiment are possible, such as different computer systems may be used, different communications media such as wireless communications, as well as different types of software may be used to perform equivalent functions, all of which fall within the true spirit and scope of the invention as measured by the following claims.

We claim:

1. A computer implemented method for generation of a set of required procedures for processing a mortgage loan using an Internet based system having a client loan origination system electronically coupled to an automatic compliance engine, the method comprising the acts of:

the automatic compliance engine receiving a request to process a mortgage loan from the client loan origination system;

the automatic compliance engine generating a plurality of tasks, the tasks comprising actions required to process the mortgage loan, including tasks required by applicable federal or state law; and

the automatic compliance engine distributing one or more of the tasks to the client loan origination system.

2. The computer implemented method for automated processing a mortgage loan of claim 1 comprising the additional act of the automatic compliance engine monitoring completion of the plurality of tasks whereby a report of completion of all required tasks can be generated.

3. The computer implemented method for automated processing of a mortgage loan of claim 1 comprising the additional act of the automatic compliance engine authenticating a person submitting the request to process a mortgage loan.

4. The computer implemented method for automated processing of a mortgage loan of claim 1 wherein the plurality of tasks required to process the mortgage loan are based upon mortgage loan related laws and regulations comprising Federal, State, local and professional regulations and requirements and implementing instructions relating to mortgage loan processing.

5. The computer implemented method for automated processing of a mortgage loan of claim 1 wherein the client loan origination system communicates with the automatic compliance engine using an XML format according to an application programming interface (API) controlled by the automatic compliance engine.

6. The computer implemented method for automated processing of a mortgage loan of claim 1 wherein the client loan origination system communicates with the automatic compliance engine using a web page developed for use with the automatic compliance engine.

7. An apparatus for automated processing of a mortgage loan comprising:

an automatic compliance engine having logic mechanisms programmed to generate a plurality of tasks, the tasks comprising actions required to process the mortgage loan, including tasks required by applicable federal or state law;

the automatic compliance engine coupled electronically to a client loan application system;

the automatic compliance engine having communications devices for receiving a request to process a mortgage loan from the client loan application system; and

the automatic compliance engine having additional logic mechanisms programmed to electronically distribute one or more of the tasks to the client loan application system.

8. The apparatus of claim 7 further comprising electronic logic devices in the compliance engine programmed to monitor completion of the plurality of tasks and to generate a report of completion of all required tasks.

9. The apparatus of claim 7 wherein the compliance engine communicates with the client loan application system using an XML format according to an API controlled by the compliance engine.

10. The apparatus of claim 7 wherein the plurality of tasks generated by the compliance engine which are required to process the mortgage loan are based upon mortgage loan related laws and regulations comprising Federal, State, local and professional regulations and requirements and implementing instructions relating to mortgage loan processing.

11. An apparatus for automated processing of a mortgage loan comprising:

means for receiving a request to process a mortgage loan from a client loan application system;

means, coupled to the means for receiving a request to process a mortgage loan from a client loan application system, for generating a plurality of tasks, the tasks comprising actions required to process the mortgage loan, including tasks required by applicable federal or state law; and

means, coupled to the means for generating a plurality of tasks required to process the mortgage loan, for electronically distributing one or more of the plurality of tasks to the client loan application system.

12. In a network having a user node including a browser program coupled to said network, said user node under the control of a client loan application system for providing requests for information and providing mortgage loan application related commands on said network, a network node comprising:

a mortgage loan processing server node responsive to a request from said user node to process a mortgage loan, whereby said mortgage loan processing server node provides a first mechanism for generating a plurality of tasks, the tasks comprising actions required to process

the mortgage loan, including tasks required by applicable federal or state law; and provides a second mechanism coupled to the first mechanism, for distributing one or more of the plurality of tasks to the user node.

13. The network node of claim 12 wherein the mortgage loan processing server node provides a third mechanism to electronically communicate with the user node using an XML format for an API controlled by the mortgage loan processing server node.

14. The network node of claim 12 wherein the actions required to process the mortgage loan are based upon mortgage loan related laws and regulations comprising Federal, State, local and professional regulations and requirements and implementing instructions relating to loan processing.

15. A computer program product stored on a computed useable medium, comprising;

a first computer readable program mechanism for receiving a request to process a mortgage loan from a client loan application system;

a second computer readable program mechanism for generating a plurality of tasks, the plurality of tasks comprising actions required to process the mortgage loan, including tasks required by applicable federal or state law; and

a third computer readable code mechanism for distributing one or more of the plurality of tasks to the client loan application system.

16. The computer program product of claim 15 comprising a fourth computer readable code mechanism for monitoring completion of the plurality of tasks whereby a report of completion of all required tasks can be generated.

17. The computer program product of claim 15 wherein the plurality of tasks required to process the mortgage loan are based upon loan related laws and regulations comprising Federal, State, local and professional regulations and requirements and implementing instructions relating to mortgage loan processing.

18. The computer program product of claim 15 wherein the communications with the client loan application comprises messages containing data in XML format.

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(54) **METHOD AND SYSTEM FOR PORTABLE RETIREMENT INVESTMENT**

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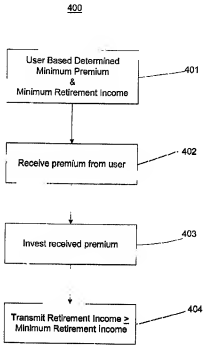
(57) **ABSTRACT**

A process and a system for providing a user with a plurality of periodic retirement income payments is disclosed. The process comprises the steps of receiving an input including two of a retirement date, a minimum retirement income amount and a defined premium payment amount for payment over a plurality of preset payment intervals. The process also includes the steps of calculating the other one of the retirement date, the minimum retirement income amount and the defined premium payment amount for an accumulation period defined by the retirement date and a current age of the user; receiving a premium payment amount from the user during the accumulation period; investing the received premium payment amount in an account in a manner consistent with one or more predefined objectives during the accumulation period to realize a retirement income amount. The process further includes the step of transmitting the retirement income amount to at least one of the user and a designated receiver at a designated time after the end of the accumulation period. The retirement income amount includes a predetermined guaranteed minimum retirement income if the received premium payments are received according to a preset premium payment schedule.



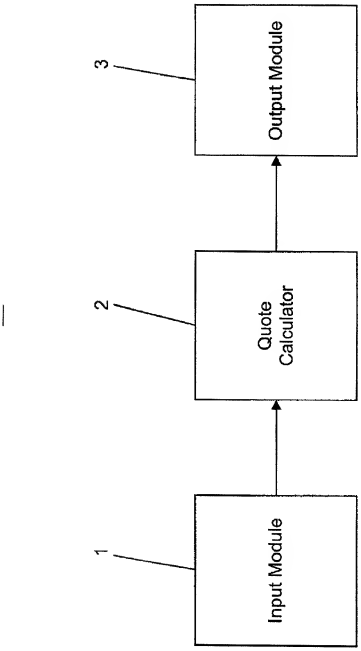


FIGURE 1

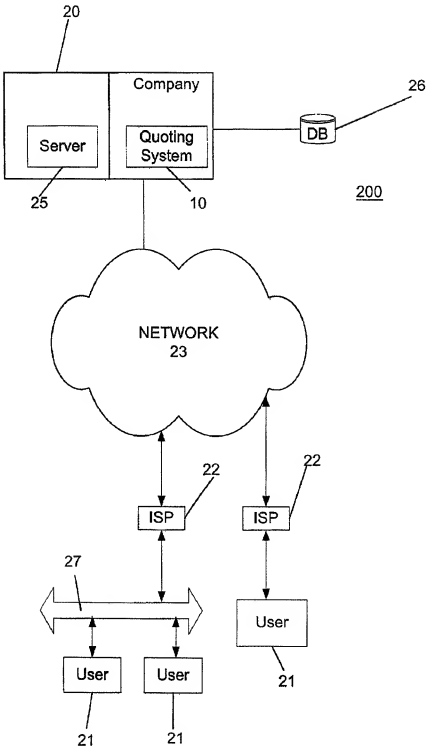

20
Company
26
Server
Quoting System
DB
25
10
200
NETWORK
23
22
22
ISP
ISP
27
User
User
User
21
21
21

FIGURE 2

B.

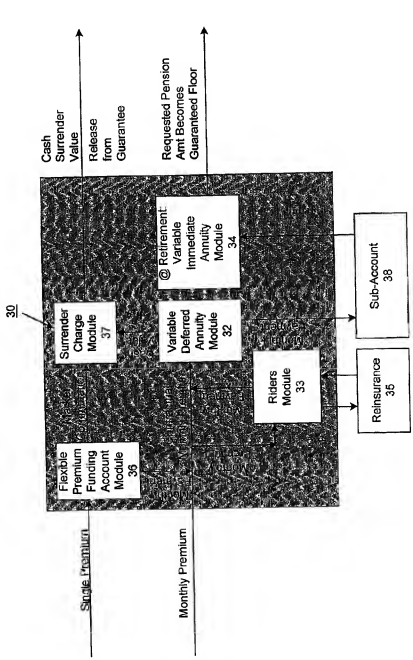

30
Single Premium
Monthly Premium
Flexible Premium Funding Account Module 36
Surrender Charge Module 37
Variable Deferred Annuity Module 32
Riders Module 33
@ Retirement: Variable Immediate Annuity Module 34
Reinsurance 35
Sub-Account 38
Cash Surrender Value
Release from Guarantee
Requested Pension Amt Becomes Guaranteed Floor

FIGURE 3

400

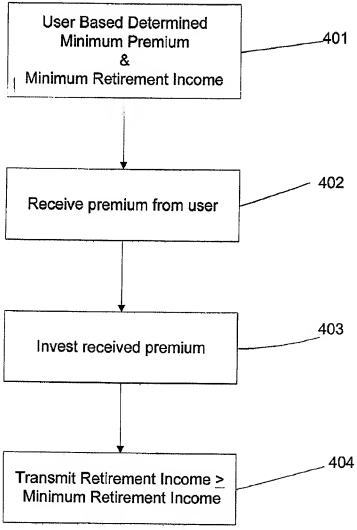

User Based Determined Minimum Premium & Minimum Retirement Income
401
Receive premium from user
402
Invest received premium
403
Transmit Retirement Income ≥ Minimum Retirement Income
404

FIGURE 4

METHOD AND SYSTEM FOR PORTABLE RETIREMENT INVESTMENT

BACKGROUND OF THE INVENTION

[0001] Up until about 1870, more than half of the United States' adult workers were farmers. These adult workers were typically engaged in their occupations until their death or until their health prevented them from continuing their occupations. It was uncommon to have a prolonged retirement period before a worker's death.

[0002] After 1870, however, industry developed rapidly and the economy tended increasingly to be characterized by industrialization and urbanization. The result was that workers increasingly were employed in more industry-related jobs and became more dependent upon a continuing flow of monetary income to provide for themselves and their families. Additionally, the average life expectancies of workers began to increase significantly. It became more common for workers to retire from employment and to survive for longer periods of time following their retirements. Retirement programs began to take hold. The Social Security program was introduced in 1935 and had an old age insurance component which provided a lump sum benefit for workers at age 65. At that time, the average life expectancy of a worker was 68.

[0003] Currently, however, half of male workers reaching age 65 can expect to still be alive at age 82 and half of female workers reaching age 65 can expect to be alive at age 86. The Social Security program is not keeping pace with such changes. The number of employees entering the workforce has been less than the number of new retirees for the last several years and this trend is expected to increase as the "Baby Boomers" age. The Social Security Administration ("SSA") projects a shortfall in its trust fund which provides benefits to retirees beginning in 2013. The SSA believes that an immediate and permanent increase of social security payroll taxes is necessary in order to enable it to pay for the full amount of old age benefits it currently provides retirees. Now, employees and employers contribute approximately 12.4 percent of salaries to the Social Security trust fund. The SSA projects that contributions must be increased to at least 38 percent in order for its trust fund to remain fully funded. Therefore, it is becoming increasingly uncertain whether the Social Security program will continue to remain viable until the time that today's workers are ready to retire. Moreover, many retirees have found that the amount of retirement benefits to which they are entitled under the Social Security program is insufficient to enable them to maintain a desired level of comfort in their retirement. They have found a need to supplement such Social Security benefits with income from other sources.

[0004] In addition to the institution of the Social Security program in the 1930s, beginning in the early 1900s, it became increasingly more common for employers to provide their workers, or employees, with some sort of retirement benefits or pensions. These retirement benefits or pensions were originally designed, in part, to reward an employee for his/her long career with a company and to help provide an income once such employee retired. Such retirement benefits or pension plans therefore required minimum periods of employment before an employee's entitlement to the pension amount became vested. However, many such retirement benefits or pensions are not portable. In other words, if an employee leaves the employ of an employer, that employee may lose all entitlement to such retirement benefit or pension if the employee terminates his/her employment prior to the expiration of the vesting period. This was not a problem when employers first instituted such retirement benefits or pension plans as employees tended to remain employed with one employer for their entire career until they retired.

[0005] However, in today's mobile society, employees do not tend to remain employed by one employer for their entire careers. Many employees therefore lose some or all of their projected retirement benefits which may have accrued during their employ by their employers when they leave the employ of such employers.

[0006] Furthermore, in addition to the trend of a more mobile society and an increased level of employment changes, many employers are decreasing the numbers of their employees and are instead increasingly turning to non-employee labor in part to cut expenses resulting from employee benefits such as costs related to funding employee retirement plans. Thus, many individuals in the workforce today are technically not considered "employees" but instead are independent contractors for whom employment benefits such as retirement benefits are not provided. Additionally, many employers are ceasing to offer defined benefit plans altogether because of the costs. In fact, according to statistics published by the Pension Benefit Guaranty Corporation, defined benefit pension plans of employers have decreased by more than 60 percent since 1985, with the number of U.S.-based employers that offer such defined benefit pension plans decreasing from 114,000 in 1985 to less than 40,000 in 1999. Only 21.3 percent of working family heads are currently covered by an employer-funded defined retirement benefit or pension plan.

[0007] Because of the decrease in the number of employers that offer defined retirement benefit pension plans, the decrease in the number of workers entitled to employer-funded retirement benefits and also because of the increased mobility of the workforce resulting in the loss of such employer-funded benefits, many workers have started to fund their own retirement savings plans. Tax laws have enabled workers to realize tax benefits from deferring their income by putting amounts from their paychecks into such retirement savings plans. Increasingly, such employee-self-funded retirement savings plans are becoming the primary sources of income on which employees survive following retirement.

[0008] However, one disadvantage of the increased reliance upon employee-self-funded retirement savings is that these plans do not provide a level of retirement income that is guaranteed for the employee. In addition, many employees do not have any idea of an amount required to be saved in order to achieve a desired level of income to ensure a comfortable lifestyle upon their retirement. Thus, they do not contribute a sufficient amount of their salaries towards such retirement savings to provide an adequate income level to maintain the standard of living they desire upon retirement. Based on the results of the Retirement Confidence Survey sponsored by the Employee Benefits Research Institute (EBRI), the American Savings Education Council (ASEC), and Matthew Greenwald and Associates, 22 per-

cent of all employed adult workers have saved less than $10,000 towards retirement, 50 percent have saved less than $50,000 and only 25 percent of adult workers over the age of 55 have accumulated more than $100,000.

[0009] Retirement income needs may increase in the event such retirees suffer from health-related problems. In fact, many employees today express concern that they will not have adequate funds saved to provide for themselves during their retirement in the event they suffer health-related problems after they retire. They are currently seeking some means to ensure a higher level of income saved for such crises.

[0010] Employees often do not participate in their employer-sponsored retirement savings plans which will increase the level of their savings through interest income or a return on investment. Also, many individuals lack the sophistication needed to determine the appropriate type of investment vehicle which will offer them a high return on their investment but which is also secure enough so that their savings are not placed at risk by a high-risk type of investment vehicle.

[0011] Thus, there is a need for an investment vehicle which will provide a minimum retirement income which is portable so that a worker will not lose any income vested in a fully funded investment vehicle if the worker leaves the employ of an employer or changes jobs.

[0012] There is also a need to provide a defined retirement benefit which will guarantee an individual a minimum defined income level upon the individual's retirement.

[0013] Additionally, there is a need for a retirement investment vehicle which may provide a guaranteed minimum level of retirement income and also may afford an individual an opportunity for an increase in value of the benefits provided if market performance of the retirement vehicle exceeds a predefined benchmark.

BRIEF SUMMARY OF THE INVENTION

[0014] The above-described problems and needs are addressed by the system and process of the present invention. According to one embodiment of the invention, a process for providing a user with a plurality of periodic retirement income payments is disclosed. The process comprises the steps of receiving one or more premium payments from the user during an accumulation period; and investing the received premium payments in an account in a manner consistent with one or more predefined objectives during the accumulation period and a payout period to realize a retirement income amount. The process further includes the step of transmitting the retirement income amount to at least one of the user and a designated receiver at a designated time after the end of the accumulation period. The retirement income amount includes a predetermined guaranteed minimum retirement income amount if the received premium payments are received according to a predetermined premium payment schedule, wherein one of the predetermined guaranteed minimum retirement income amount and a premium payment amount is defined by the user.

[0015] In another aspect of the invention, a quoting process is provided. The quoting process comprises the steps of receiving as an input two of a retirement date, a minimum retirement income amount and a defined premium payment amount for payment at each of a plurality of preset payment intervals; and calculating the other one of the retirement date, the minimum retirement income amount and the defined premium payment amount, wherein the user receives the minimum retirement income amount when the user reaches the retirement date if the user pays the defined premium payment amount at each of the preset payment intervals.

[0016] In yet another aspect, a process for providing a user with periodic retirement income payments is disclosed. The process comprises the steps of receiving an input including two of a retirement date, a minimum retirement income amount and a defined premium payment amount for payment at each of a plurality of preset payment intervals; calculating the other one of the retirement date, the minimum retirement income amount and the premium payment amount based on the input for an accumulation period defined by the retirement date and a current age of the user; receiving a plurality of premium payments from the user during the accumulation period; investing the received premium payments in an account in a manner consistent with one or more predefined objectives during the accumulation period to realize a retirement income amount; and transmitting the retirement income amount to at least one of the user and a designated receiver at a designated time after the end of the accumulation period wherein the retirement income amount includes a predetermined guaranteed minimum retirement income if the received premium payments are received according to a predetermined premium payment schedule, and wherein one of the predetermined minimum is retirement income amount and the premium payment amount is defined by the user.

[0017] Additionally, in another aspect, a process for investment is disclosed. The process comprises the steps of receiving a premium payment amount from a user at each of a plurality of predefined intervals over an accumulation period during employment at a first employer during a first part of the accumulation period; receiving the premium payment amounts from the user during employment at a second employer during a second part of the accumulation period; investing the received premium payment amounts during the accumulation period; and transmitting a retirement income amount to at least one of the user and a designated receiver at a designated time after the end of the accumulation period, wherein the retirement income amount includes a predetermined guaranteed minimum retirement income if the total received premium payment amounts were received according to a predetermined premium payment schedule, and wherein one of the predetermined minimum retirement income amount and the premium payment amount is defined by the user.

[0018] In still another aspect, the invention includes a quoting system. The quoting system comprises means for receiving as an input two of a retirement date, a minimum retirement income amount and a defined premium payment amount for payment at each of a plurality of preset payment intervals; and means for calculating the other one of the retirement date, the minimum retirement income amount and the defined premium payment amount, wherein the user receives the guaranteed minimum retirement income when the user reaches the retirement date if the user pays the defined premium payment amount at each of the preset payment intervals.

[0019] Additionally, in another aspect, a system for providing a user with a plurality of periodic retirement income payments is disclosed. The system comprises a variable deferred annuity module to receive a predetermined premium payment from the user at each of a plurality of predetermined payment intervals to invest the premium payments and to output an income generating payment; and a variable immediate annuity module to receive the income generating payment and to output a periodic retirement income payment amount wherein the periodic retirement income payment amount is greater than or equal to a predetermined guaranteed minimum periodic retirement income payment amount if the premium payments received are received according to a predetermined premium payment schedule, and wherein one of the predetermined minimum periodic retirement income payment amount and a premium payment amount is defined by the user.

[0020] The accompanying drawings, which are incorporated in and constitute a part of this specification, together with the description, serve to explain the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] **FIG. 1** is a block diagram illustrating a quoting system for a retirement benefit according to the present invention;

[0022] **FIG. 2** is a block diagram illustrating one embodiment of an overall system in which the quoting system of **FIG. 1** may be implemented;

[0023] **FIG. 3** is a block diagram illustrating one embodiment of a system for providing a user with periodic retirement income payments; and

[0024] **FIG. 4** is a flow diagram illustrating one embodiment of a process for providing a user with periodic retirement income payments.

DETAILED DESCRIPTION OF THE INVENTION

[0025] Reference will now be made in detail to the present preferred embodiments of the invention, examples of which are illustrated in the accompanying drawings in which like reference numerals refer to corresponding elements.

[0026] The present invention is described in relation to a portable retirement benefit annuity. Nonetheless, the characteristics and parameters pertaining to the systems and methods may be applicable to other types of annuities and other financial instruments.

[0027] An annuity is a flexible tax-deferred retirement investment product that can provide long term earnings for an investor ("user"). An annuity allows a user's retirement savings to grow on an income tax-deferred basis and allows the user to choose a payout option that best meets the user's need for income when the user retires. Payout options may include a lump sum payment, a plurality of periodic payments, income for a remainder of the user's life, or a plurality of income payments paid out over a certain period of time. The portable retirement annuity described herein will be an annuity providing a plurality of periodic income payments for the remainder of the user's life, for a period not less than a defined certain number of years, or for some combination of the two.

[0028] When a user purchases an annuity, also known as a long-term investment contract, the user typically pays an insurer an initial sum of money (called a premium or principal) and the insurer invests that principal in an investment type of financial product to earn a return on that principal. In return for the initial sum of money, or premium payment, and the use of that initial sum of money, the insurer guarantees the user either a steady stream of income payments with no upside earnings potential or a stream of income payments adjusted for market performance (but generally not both) beginning at a specified date in the future and lasting for a specified period of time. While the premium payment is invested in the investment vehicle, the premium payment grows or compounds over time, but the user does not have to pay any taxes on the earnings. This phase of an annuity contract is referred to as an accumulation period. Once the user has accumulated an amount of money the user requires for retirement, the user can begin to receive periodic income payments made from the accumulated investment premium. Only when the user begins to receive income payments are the moneys subject to taxes. One disadvantage to a typical annuity contract, however, is that it typically has a date which, if the user wishes to withdraw his/her moneys prior to such date, the user will be penalized and will have to pay the insurer a surrender charge (we will refer to this date as the "surrender charge period date"). Additionally, if the user withdraws his/her money out of the annuity investment vehicle account prior to age 59½ years, other than as a series of periodic payments, the Internal Revenue Service also requires payment of a penalty since he/she had obtained the benefit of tax-deferred treatment during the time the moneys were invested.

[0029] There are several standard types of annuity contracts which insurers offer. A fixed annuity is an annuity where the insurer guarantees the user the invested principal value and a payment of a fixed rate of return for a stated period of time on the premium payment invested during the accumulation period and a guaranteed income for life if the user "annuitizes" or converts the annuity into a stream of regular income payments. The insurer takes responsibility for investing the user's premium payment in whatever types of financial products it believes will earn enough income to enable it to meet its obligations under its guaranteed rate of return to the user. Assuming that the user holds the annuity contract until after the surrender charge period date, the benefit of such a fixed annuity contract to the user is in having a guaranteed income payment stream over a long period of time. The user is essentially betting that he/she will live a longer period of time than expected and will therefore realize a substantially higher amount of money in the guaranteed income payments than the initial premium payment. On the other hand, the insurer is betting on the opposite scenario, i.e., that it can make favorable investments of the premium payments which result in increased earnings and that the users, as a class, will not live longer than expected.

[0030] Fixed deferred annuities are popular because of their safe and predictable rates of return. Insurers often place fixed annuity contract premium payments into bonds or other conservative types of investment vehicles. Since fixed deferred annuities guarantee a specific return on the initial investment and a guaranteed return of principal, they are attractive to potential investors when the equity stock market is under-performing and interest rates are on the rise. How-

ever, under fixed deferred annuity contracts, the user is generally not advised of and does not participate in the insurer's investment choices and thus has to trust the insurer to make wise investment decisions. Moreover, under recent economic conditions, fixed deferred annuities have not been a popular choice as users have preferred to participate in the equity stock markets with the expectation of a higher rate of return on investment, but with the full knowledge that their principal may be at risk.

[0031] Variable deferred annuities have become more popular in recent years. With a variable deferred annuity contract, the user can decide how his/her premium payment will be allocated among a specific menu of investment vehicles, or sub-accounts, offered by the insurer. Sub-accounts are pooled investments of a number of users, similar to mutual funds, with varying investment objectives and strategies and typically have a professional fund manager similar to managers of mutual funds. The manager of the sub-account will decide where to invest the pooled funds based upon the objectives of the particular sub-account, e.g., growth, emerging industries, bonds, etc. The accumulated moneys in the annuity account of the user fluctuate with market values and with the user's choice of sub-accounts.

[0032] Variable deferred annuities have advantages over fixed deferred annuities since they enable the user to direct how his/her premium payment will be invested among one or more sub-accounts. Moreover, variable deferred annuities could potentially enable the user to earn more money on the initial investment than he/she could with a fixed deferred annuity contract if the user selected strong sub-accounts with high rates of return on investment. However, the variable deferred annuity contract makes no guarantees to the user regarding the amounts earned on the premium invested, the value of invested principal or the income amount to be paid out after the accumulation period, so the user could also potentially end up earning less money than desired if the sub-accounts selected by the user are weak or perform poorly. Since the value of the variable deferred annuity is tied to the risks inherent in the stock market, a downturn in the stock market could cause the value of the variable deferred annuity to drop. Thus, variable deferred annuities are not desirable to those users who are risk averse.

[0033] There are also fixed immediate annuity contracts. Purchasing a fixed immediate annuity requires a lump sum premium payment. The amount of retirement income is determined at the time of purchase and the retirement income can be paid out over the life of the user, over a certain period of time, or over a combination of the two. Retirees often purchase a fixed immediate annuity with funds they receive from 401(k) plans, Individual Retirement Accounts ("IRAs"), savings account funds, the cash value or death proceeds from a life insurance policy or proceeds from the sale of a home. The insurer issuing the fixed immediate annuity guarantees payments directly to a user on a monthly, quarterly, semi-annual or annual basis for the life of the user, for a certain period of time, or for some combination of the two. At the time of purchase, the income payments are locked based upon current market interest rates. The user's income payments are determined by, among other things, a combination of the market interest rate, the payment options selected by the user, the premium payment amount and the life expectancy of the user. Once the lump sum premium payment is made, the user has exchanged the lump sum premium payment for a series of guaranteed payments that will not change as a result of market performance. With a fixed immediate annuity, the user does not have any input concerning how the lump sum premium payment is invested.

[0034] A variable immediate annuity, like a fixed immediate annuity, guarantees income over the life of the user, for a certain period of time, or for a combination of the two. However, unlike a fixed immediate annuity where the income payments are fixed and do not vary, the income payments received from the variable immediate annuity vary based on market performance. The user could potentially earn more or less on a variable immediate annuity because of the equity investments.

[0035] In one embodiment of a process according to the present invention, an insurer is able to combine favorable features of each of the above-described annuities into a single retirement annuity product, i.e., a guaranteed payment stream in a manner similar to a fixed immediate annuity, a guaranteed retirement income amount in a manner similar to a fixed immediate annuity; an upside potential for a return on investment during the accumulation period in a manner similar to a variable deferred annuity; and a potential to realize an increased retirement income amount based on equity market performance in a manner similar to a variable immediate annuity.

[0036] In another embodiment, pursuant to a risk mitigation process of the present invention, an insurer may offer a guaranteed minimum retirement income amount to a user by eliminating the inherent economic uncertainties associated with traditional deferred and immediate annuities. By having the user predetermine before purchase of a retirement annuity product a desired retirement date and a predictable premium payment amount and a schedule of premium payments, the insurer is able to lower the cost to the user of the guaranteed minimum retirement income amount.

[0037] **FIG. 1** is a block diagram illustrating one embodiment of a quoting system **10** for retirement benefits according to the present invention. The quoting system **10** may include a quote calculator **2**, an input module **1** and an output module **3**. The input module **1** and the output module **3** are shown for illustrative purposes only. In one embodiment, either the input module **1** or the output module **3**, or both, may be a part of the quote calculator **2**. The quoting system **10** may be used to provide a quote to a user on one or more parameters relating to a purchase or a contract for a retirement annuity product.

[0038] The input module **1** may receive information input by a user or an agent on behalf of a user regarding the user and one or more retirement desires of the user. In one embodiment, the input information may include two of a retirement date, a minimum retirement income amount the user would like to receive, or a defined premium payment amount the user would like to make towards the user's minimum retirement income amount. In one embodiment, the input information may include a retirement date, a minimum retirement income amount, a premium payment amount, a current age of the user, a gender of the user, and an indication of whether a retirement annuity will be a joint retirement annuity (i.e., based on two lives) or a single retirement annuity (i.e., based on one life). Additionally, in one embodiment, the input information may include an

indication of whether the user would like to add one or more riders to the retirement annuity contract and/or the type of rider(s) to be added. The riders available to the user may include a disability rider, an unemployment rider and an early death rider as described below with reference to **FIG. 3**.

[0039] In one embodiment, an agent or a software program may help the user to determine the retirement date, the minimum retirement income amount the user would like to receive or the defined premium payment amount the user would like to make. In one embodiment, the input module **1** may represent a screen of a software program or a web page.

[0040] The quote calculator **2** may include hardware and/or software to calculate retirement account information. Given two of the user's retirement date, the minimum retirement income amount or the defined premium payment amount as inputs, the output module **3** may calculate the other one of the retirement date, a premium payment amount required to meet the user's minimum retirement income amount or the retirement income amount that would be paid to the user based on the defined premium payment amount the user would like to make, depending on the one not input by the user to the input module **1**. For example, if the user chooses to input the user's retirement date and the desired minimum retirement income amount, the output of the quote calculator **2** would be the required premium payment amount to achieve the minimum retirement income amount. If the user chooses to input the retirement date and the desired premium payment amount, the output of quote calculator **2** would be the minimum retirement income amount available to the user based on the defined premium payment amounts the user would like to make. However, if the user chooses to input the desired premium payment amount and the minimum retirement income amount, the output of the quote calculator **2** would be the user's retirement date.

[0041] In one embodiment, the output of the quote calculator **2** may include a retirement annuity contract. In one embodiment, the user may be presented with a quote for the purchase of a proposed retirement annuity contract including terms meeting the parameters input by the user. The quote may be presented to the user as a web page or another similar type of user interface.

[0042] In one embodiment, the quote calculator **2** may base the premium payment amount quote or the minimum retirement income amount quote on an annuity accumulation period defined by the user's retirement date and the date of the quote. In one embodiment, the quote for the minimum retirement income amount will guarantee that the user is paid the minimum retirement income if the user pays the premium payment amount at each of a plurality of predetermined payment intervals, for example, a plurality of monthly payment intervals. In one embodiment, the premium payment amount or the minimum retirement income amount may be calculated by using at least one equity performance factor such as a stock index. Additionally, the minimum retirement income amount may be varied depending on a sales channel pursuant to which a sale of an annuity contract is made. For example, if the sale of the annuity contract was made direct to a consumer (e.g., via an Internet web site) without an agent, an insurer offering such annuity contract can pass its distribution savings realized by virtue of not having to deal with the agent onto the consumer in the form of a higher guaranteed minimum retirement income.

[0043] In one embodiment, the output module **3** may also output a cost breakdown including a retirement income amount, a disability income rider charge, an unemployment income rider charge, an early death rider charge, a lump sum equivalent, an interest rate lock period and a buy-down option where the user can buy-down the premium payment amount incrementally. In one embodiment, if the user has a choice of either a paid-up option or a partially paid-up option for the early death rider, the output module **3** may output a quote including each of these options. In another embodiment, the user may input a choice of a type of early death rider and the output module **3** may output only a cost of the type of early death rider chosen by the user.

[0044] In one embodiment, the user may input information in a software program or a web page, including a name, an address, a Social Security or tax ID number, a beneficiary, a qualified/nonqualified pension plan, and a 1035 Exchange replacement (i.e., referring to a tax-free exchange pursuant to Section 1035 of the Internal Revenue Code). An output of the quote calculator **2** may include a signature ready application for purchase of the quoted annuity product. The signature ready application may be an electronic signature ready application that may either be printed out and signed or affixed with an electronic signature and submitted over a network, such as the Internet. The output may also include a pre-authorized check approval form pursuant to which a bank or financial institution may automatically withdraw the premium payment amount from the user's account for payment of the premium payment amounts when due. The output may further include a transmittal sheet for transmittal of the completed electronic application to a broker/dealer.

[0045] In one embodiment, the retirement income amount or annuity payment may be a joint annuity payment, for example, for a legally married couple. In one embodiment, a minimum retirement income amount may be guaranteed for either a single lifetime period or a joint lifetime period. In another embodiment, the minimum retirement income amount may be guaranteed for a single lifetime period or a joint lifetime period with a predetermined certain period for the annuity payments. The predetermined certain period may be measured from a date at which annuity payments or transmission of the retirement income to the user begins. For example, the predetermined certain period may be a ten year certain period where, if the user of the annuity dies before the end of the predetermined certain period, a beneficiary designated by the user will receive the annuity payment until the end of the predetermined certain period.

[0046] In one embodiment, a minimum retirement income amount or the defined premium payment amount may be dependent upon both a mortality rate and an interest rate. In one embodiment, the minimum retirement income amount will be guaranteed independent of the user's employer. Thus, the minimum retirement income amount described herein is fully portable if the user changes employers.

[0047] **FIG. 2** is a block diagram illustrating one embodiment of a network **200** in which the quoting system **10** of FIG. 1 may be implemented. In this embodiment, the quoting system **10** may be available to a plurality of users **21** through a network **23**, which may be the Internet. The system **200** may include a company site **20**, an internet

service provider (ISP) **22** and the users **21**. The users **21** may communicate with the company site **20** through the network **23**. The users **21** may be connected to the network **23** through the ISP **22**. In one embodiment, the users **21** may be coupled to the ISP **22** through a communications link **27**. In another embodiment, a user **21** may be coupled directly to the ISP **22**.

[0048] The communications links **23** and **27** may be comprised of, or may interface to any one or more of, the Internet, an intranet, a Personal Area Network (PAN), a Local Area Network (LAN), a Wide Area Network (WAN), a Metropolitan Area Network (MAN), a storage area network (SAN), a frame relay connection, an Advanced Intelligent Network (AIN) connection, a synchronous optical network (SONET) connection, a digital T1, T3, E1 or E3 line, a Digital Data Service (DDS) connection, a Digital Subscriber Line (DSL) connection, an Ethernet connection, an Integrated Services Digital Network (ISDN) line, a dial-up port such as a V.90, a V.34 or a V.34bis analog modem connection, a cable modem, an Asynchronous Transfer Mode (ATM) connection, a Fiber Distributed Data Interface (FDDI) connection, or a Copper Distributed Data Interface (CDDI) connection. The communications links **23** and **27** may also include or interface to any one or more of a Wireless Application Protocol (WAP) link, a General Packet Radio Service (GPRS) link, a Global System for Mobile Communication (GSM) link, a Code Division Multiple Access (CDMA) link or a Time Division Multiple Access (TDMA) link such as a cellular phone channel, a Global Positioning System (GPS) link, a cellular digital packet data (CDPD) link, a Research in Motion, Limited (RIM) duplex paging type device, a Bluetooth radio link, or an IEEE 802.11-based radio frequency link. The communications links **23** and **27** may further include or interface to any one or more of an RS-232 serial connection, an IEEE-1394 (Firewire) connection, a Fibre Channel connection, an Infrared (IrDA) port, a Small Computer Systems Interface (SCSI) connection, a Universal Serial Bus (USB) connection or another wired or wireless, digital or analog interface or connection.

[0049] Although only three users **21** are shown in FIG. **2**, in actual practice, there may be fewer or significantly more users **21** connected to the system **200** than shown. Additional users **21** may be connected through the same ISP **22** shown or through other ISPs **22**. However, for purposes of illustration, the discussion will assume the three users **21** connected to the network **23** through the two ISPs **22**.

[0050] Although any network may be used for the system **200**, for the purpose of illustration, the users **21** and the company site **20** may to be connected to the Internet **23**. The users **21** may be connected to the ISPs **22** through client computer systems having resident therein at least one user interface (UI) application module. In one embodiment, the UI application module may include an internet browser, such as a Netscape Navigator™ browser or a Microsoft Internet Explorer™ browser. The users **21** may further include an email communication application module, such as a Microsoft Beyond Mail™ application, a Netscape Mail™ application, a Eudora Pro™ application or the like.

[0051] The users **21** may be comprised of a personal computer running a Microsoft Windows™ 95 operating system, a Microsoft Windows 98 operating system, a Millennium™ operating system, a Microsoft Windows NT™ operating system, a Microsoft Windows 2000 operating system, a Microsoft Windows™ CE™ operating system, a PalmOS™ operating system, a Unix operating system, a Linux operating system, a Solaris™ operating system, an OS/2™ operating system, a BeOS™ operating system, a MacOS™ operating system, or another similar operating system or platform. The users **21** may also include a microprocessor such as an Intel x86-based device, a Motorola 68K device, a PowerPC™ device, a MIPS device, a Hewlett-Packard Precision™ device, a Digital Equipment Corporation Alpha™ RISC processor, a microcontroller or another general or special purpose device operating under programmed control. The users **21** may further include an electronic memory such as a random access memory (RAM), an electronically programmable read only memory (EPROM), a storage such as a hard drive, a compact disk read only memory (CDROM), a rewritable CDROM or another magnetic, optical or other storage medium, and other associated components connected over an electronic bus, as will be appreciated by persons skilled in the art. The users **21** may also include a network-enabled appliance such as a WebTV™ unit, a radio-enabled Palm™ Pilot or similar unit, a set-top box, a networkable game-playing console such as a Sony Playstation™ console or a Sega Dreamcast™ console, a browser-equipped cellular telephone, or another TCP/IP client or other device.

[0052] The users **21** may represent client systems used by customers or users, or agents of the company site **20**. The company site **20** may include the quoting system **10**, a server **25** and a database **26**. The quoting system **10** may be the quoting system **10** of FIG. 1.

[0053] The server **25** may include a workstation running the Microsoft Windows™ NT™ operating system, the Microsoft Windows™ 2000 operating system, the Unix operating system, the Linux operating system, a Xenix operating system, an IBM AIX™ operating system, a Hewlett-Packard UX™ operating system, a Novell Netware™ operating system, a Sun Microsystems Solaris™ operating system, the OS/2™ operating system, a BeOS™ operating system, an Apache operating system, an OpenStep™ operating system or another operating system or platform.

[0054] Although the database **26** is shown to be outside of the company site **20**, the database **26** may reside within the company site **20** in one embodiment. The database **26** may include or interface to an Oracle™ relational database such as that sold commercially by Oracle Corporation. Other databases, such as an Informix™ database, a Database **2** (DB2) database, a Sybase database, an On Line Analytical Processing (OLAP) query format database, a Standard Query Language (SQL) format database, a storage area network (SAN), a Microsoft Access™ database or another similar data storage device, query format, platform or resource may be used.

[0055] The database **26** may be used to store one or more algorithms used to calculate the quote for the premium payment amount or the retirement income amount requested by the user **21**. The database **26** may also store one or more tables, charts, investment information, information needed to generate web pages, and any other data needed to generate the quote described with reference to the output module **3** of FIG. **1**.

[0056] FIG. 3 is a block diagram illustrating one embodiment of a portable guaranteed annuity system 30 for providing a user with a plurality of periodic retirement income payments. In one embodiment, the portable guaranteed annuity system 30 may include a variable deferred annuity ("VDA") module 32 and a variable immediate annuity ("VIA") module 34. One or more premium payments received into the system 30 may be placed into the variable deferred annuity module 32.

[0057] As explained above, a variable annuity is a contract in which the premiums paid are invested in one or more stock and bond sub-accounts. A variable annuity account value reflects the performance of the investment funds selected. Over the long-term, premiums invested in equity stock funds generally reflect the growth and performance of the economy and can serve as a hedge against inflation. A deferred annuity contract is generally one in which one or more annuity payouts begin at a future date. An immediate annuity contract is generally one in which annuity payouts begin immediately or within one year. Thus, a variable deferred annuity is generally a variable annuity in which the annuity payouts begin at a future date and a variable immediate annuity is generally a variable annuity in which the annuity payouts begin immediately.

[0058] In one embodiment, the premium payments may be received periodically where the period is defined by an annuity contract. For example, the annuity contract may define a monthly periodic premium payment. In one embodiment, the user's contractual monthly premium payment may be paid into a variable deferred annuity account through an electronic funds transfer. In another embodiment, the user may be billed on a periodic basis for the contractual premium payment amount.

[0059] In one embodiment, the contractual monthly premium payment may be deposited into a predetermined sub-account 38 of the variable deferred annuity module 32. The predetermined sub-account 38 may mirror a pension fund management style. At completion of a contractual accumulation period, the monetary value invested in the predetermined sub-account 38 may be transferred to the variable immediate annuity module 34 for payout to the user.

[0060] If the amount accumulated in the predetermined sub-account 38 is greater than an amount needed for a guaranteed minimum retirement income amount, the company 20 and the user 21 share the excess earnings. Thus, the user 21 may receive an amount greater than the guaranteed minimum retirement income amount during the annuity period. If the amount accumulated in the sub-account 38 is less than the amount required to achieve the guaranteed minimum retirement income amount, the company 20 will pay the user 21 an amount equal to the guaranteed minimum retirement income amount.

[0061] In one embodiment, the user 21 may choose one or more riders for inclusion in the annuity contract such as a disability rider, an unemployment rider or an early death rider. Thus, the system 30 may include a riders module 33 to receive a portion of the contractual monthly premium payment to cover any selected riders. In one embodiment, the riders may be administered by a reinsurance entity 35. In one embodiment, if the user 21 elects to include a disability rider in the annuity contract, the user 21 will be obligated to make one or more scheduled monthly rider premium payments for a predetermined period in order that the premium payments will be made from another source in the event of a disability period. If the user 21 elects to include an unemployment rider, the user will be obligated to make one or more scheduled rider premium payments for a predetermined period to ensure that the premium payments will be made from another source in the event the user has an unemployment period. The rider premium payments cannot be transferred or withdrawn from the flexible premium funding account or from the sub-account. The rider premium payments must be paid from another source.

[0062] The period of premium payments for either of the disability rider and the unemployment rider may depend on the user's age and the user's age at disability or unemployment. In one embodiment, there may be an elimination period, such as, for example, 90 days before payments may begin. An appropriate rider or another provision may, therefore, be required in order that the premium payments will continue during the elimination period. Payments missed during the elimination period may either have a grace period charge paid by the rider or such a grace period charge may be waived pursuant to the terms of the annuity contract. The premium payments may vary based on at least one of a plurality of factors including an age of the user, a gender of the user, a length of time of the accumulation period, an occupation of the user, and a scheduled premium payment amount.

[0063] In one embodiment, the early death rider for annuity contracts with joint owners will pay the remaining monthly premium payments in the event one of the joint owners dies before an annuity payment start date. This is a decreasing term insurance rider that may be issued as a single life annuity contract or a joint life annuity contract.

[0064] In one embodiment, the user 21 may choose to pay a single premium which fulfills the total premium payments to be paid over the annuity contractual accumulation period. In this embodiment, the single premium may be deposited into a flexible premium funding account in a flexible premium funding account module 36. In this embodiment, money from the flexible premium funding account may be transferred to the user's variable deferred annuity account in the variable deferred annuity module 32 periodically according to the user's annuity contract. For example, if the user has a contract requiring monthly premium payments, the user's entire monthly premium payment may be transferred to the user's variable deferred annuity account at each of the preset payment intervals.

[0065] In one embodiment, the user 21 may choose to pay the defined premium payment amounts at the preset payment intervals through electronic funds transfer. In another embodiment, the user 21 may choose to pay the defined premium payment amounts at the preset payment intervals via manual check and may incur a monthly billing charge.

[0066] In one embodiment, each user's flexible premium funding account may be used to buy-down an amount of the user's monthly premium payment. In this embodiment, the same amount will be transferred from the user's flexible premium funding account to the user's variable deferred annuity account every month until the end of the user's contractual accumulation period. Thus, if the user's monthly premium payment amount is $1,000 and the user's flexible premium funding account is used to contribute $300 per

month towards payment of that $1,000 monthly premium payment, the user will pay $700 a month in addition to the $300 amount contributed from the user's flexible premium funding account. In this embodiment, the company **20** may notify the user **21** when the user **21** must make new arrangements to make the monthly premium payments. In another embodiment, the user **21** may make more than one single premium payment to the user's annuity account. In such embodiment, each single premium payment made by the user **21** will be put into a separate user account in the flexible premium funding account module **36**.

[0067] In one embodiment, if the user **21** misses a premium payment and the premium payments are not paid with interest within a predetermined time period, the user may forfeit the contract guarantee of the retirement annuity contact.

[0068] In one embodiment, premium payments allocated to be paid from the user's flexible premium funding account may be transferred monthly from the user's flexible premium funding account to the user's variable deferred annuity account based on a predetermined formula for allocation.

[0069] In one embodiment, the user **21** may choose to be released early from the annuity contract. In such embodiment, the system **30** may include a surrender charge module **37**. The surrender charge module **37** may deduct a surrender charge from a cash value amount of the user's VDA in the variable deferred annuity module **32**. The surrender charge may be based upon the length of the annuity contractual accumulation period and a time period remaining left in the contractual accumulation period at a date when the user **21** requests to be released early from the annuity contract.

[0070] In one embodiment, if the user **21** has a flexible premium funding account at the time the user **21** requests to be released early from the annuity contract, a market commutation value of the amount in the user's flexible premium funding account will be transmitted to the user **21**. In one embodiment, a surrender charge may first be deducted from the market commutation amount in the user's flexible premium funding account. In another embodiment, the market commutation value of the user's flexible premium funding account will not be subject to any surrender charge.

[0071] In one embodiment, the user **21** may be allowed to withdraw funds from the user's retirement annuity account. In one embodiment, if withdrawals made from the user's annuity account are not repaid within a predetermined time period, the user's retirement annuity contract may forfeit the contract guarantee. In another embodiment, the withdrawal payments may be subject to surrender charges.

[0072] In one embodiment, if the user has a flexible premium funding account, the withdrawals will first be taken from the sub-account. In another embodiment, if the user has a flexible premium funding account. In some cases, withdrawals of this type may be subject to a commutation charge. Withdrawals coming from the user's flexible premium funding accounts may be taken out on a first-in first-out basis, according to one embodiment.

[0073] **FIG. 4** is a flow diagram illustrating one embodiment of a process **400** for providing a user **21** with a plurality of periodic retirement income payments. At step **401**, the user **21** may input a desired premium payment amount and a minimum retirement income amount in a portable guaranteed annuity system **30**.

[0074] At step **402**, the system **30** receives a premium payment from the user **21**. In one embodiment, the step **402** of receiving the premium payment from the user may include a step of receiving a monthly premium payment from the user **21**. In one embodiment, the premium payments received from the user **21** may include a premium tax, such as, for example, state-specific charges. In another embodiment, the received premium payment may include a monthly billing charge for billing the user **21**. In yet another embodiment, the premium payments received from the user **21** may include premium payments associated with riders. At step **403**, the system **30** invests the received premium payment.

[0075] At step **404**, the system **30** may transmit the accumulated retirement income to the user **21**. In one embodiment, the step **404** of transmission of the retirement income may include a step of placing at least a portion of the user's account value accumulated in the variable deferred annuity module **32** into the variable immediate annuity module **34**.

[0076] The step **404** of transmission of the accumulated retirement income to the user **21** may begin at a user-defined annuity payment start date. In one embodiment, the annuity payment start date may be required to be at least ten years after an annuity contract start date. Until then, the premium payments remain invested in a variable deferred annuity. The form of the variable immediate annuity once payments begin and parameters relating to the user **21** upon which it is based must be determined at the contract start date. In one embodiment, the form of the VIA may not be changed. In another embodiment, the form of the VIA may be changed but the user **21** may forfeit the contract guarantee.

[0077] In one embodiment, the form of the VIA may be changed in relation to legal marriages and qualified domestic relation orders (QDROs) relating to the user. These changes may include 1) a single user/annuitant may be allowed to add a spouse to the VIA if the marriage occurs after the contract start date, in which case the benefit may be recalculated; and 2) if the spousal joint owner/annuitants get divorced after issue and the contract is split by a QDRO, the company may split the contract into two single contracts proportionally (benefits, premiums and contract values).

[0078] While the foregoing description includes many details and specificities, it is to be understood that these have been included for purposes of explanation only, and are not to be interpreted as limitations of the present invention. Many modifications to the embodiments described above can be made without departing from the spirit and scope of the invention, as is intended to be encompassed by the following claims and their legal equivalents.

What is claimed is:

1. A quoting process comprising the steps of:

receiving as an input two of a retirement date, a minimum retirement income amount and a defined premium payment amount for payment at each of a plurality of preset payment intervals; and

calculating the other one of the retirement date, the minimum retirement income amount, and the defined premium payment amount, wherein the user receives the minimum retirement income amount when the user

reaches the retirement date if the user pays the defined premium payment amount at each of the preset payment intervals.

2. The quoting process of claim 1 wherein a total of the preset payment intervals is based on a difference between the retirement date and a current age of the user.

3. The quoting process of claim 1 wherein each of the preset payment intervals is a month.

4. The quoting process of claim 1 wherein the step of calculating the other of the minimum retirement income amount and the defined premium payment amount is based on at least one of a table of mortality rates and a predetermined interest rate.

5. The process of claim 1 further comprising the step of presenting the user with a signature-ready application for electronic transmittal.

6. The process of claim 1 further comprising the step of presenting the user with an application including the received input and the calculated minimum retirement income amount or the calculated defined premium payment amount.

7. A process for providing a user with a plurality of periodic retirement income payments comprising the steps of:

receiving one or more premium payments from the user during an accumulation period;

investing the received premium payments in an account in a manner consistent with one or more predefined objectives during the accumulation period and a payment payout period to realize a retirement income amount; and

transmitting the retirement income amount to at least one of the user and a designated receiver at a designated time after the end of the accumulation period, wherein the retirement income amount includes a predetermined guaranteed minimum retirement income amount if the received premium payments are received according to a predetermined premium payment schedule, and wherein one of the predetermined guaranteed minimum retirement income amount and a premium payment amount is defined by the user.

8. The process of claim 7 wherein the retirement income amount is an amount greater than the predetermined guaranteed minimum retirement income amount.

9. The process of claim 7 wherein the step of receiving the premium payments includes the step of receiving the premium payments in a plurality of predefined interval payments during the accumulation period.

10. The process of claim 9 wherein the step of receiving the premium payments in the plurality of predefined interval payments includes the step of receiving a plurality of monthly payments during the accumulation period.

11. The process of claim 9 wherein the step of receiving the premium payments in the plurality of predefined interval payments includes the step of receiving a late payment within a grace period after an interval payment was due.

12. The process of claim 11 wherein the step of receiving the late payment within the grace period includes the step of receiving the late payment along with an interest payment for the time between when the interval payment was due and the time when the late payment is received wherein the interest payment is calculated based on a predefined interest rate.

13. The process of claim 12 wherein the step of receiving the premium payments includes the step of receiving at least a portion of one of the premium payments in an amount greater than a predefined interval payment and converting the portion of the one of the premium payments into the predefined interval payment.

14. The process of claim 13 wherein the step of converting the portion of the premium payments includes the step of placing the portion of the premium payments in a flexible premium funding account and transferring a predefined interval payment to the account after each predefined interval until the flexible premium funding account is empty.

15. The process of claim 13 wherein the step of converting the portion of the premium payments includes the step of placing the portion of the premium payments in a flexible premium funding account and transferring a predefined portion of the predefined interval payment to the account after each predefined interval until the end of the accumulation period.

16. The process of claim 7 wherein the step of receiving the premium payments includes the step of receiving the premium payments from the user during employment at a first employer during at least a part of the accumulation period.

17. The process of claim 7 wherein the step of receiving the premium payments includes the step of receiving the premium payments from an insurance policy in a 1035 tax-free exchange.

18. The process of claim 16 wherein the step of receiving the premium payments includes the step of receiving the premium payments from the user during employment at a second employer during at least a part of the accumulation period in which the user is not employed at the first employer.

19. The process of claim 7 wherein the user comprises two individuals, each premium payment comprises a joint premium payment, the predetermined guaranteed minimum retirement income amount comprises a joint guaranteed minimum retirement income amount and the retirement income amount comprises a joint retirement income amount.

20. The process of claim 19 further comprising the step of dividing the premium payment, the predetermined guaranteed minimum retirement income amount and the retirement income amount proportionally wherein each of the two individuals is assigned a proportionally split premium payment, a proportionally split predetermined guaranteed minimum retirement income amount and a proportionally split predetermined retirement income amount.

21. The process of claim 20 further comprising the step of adding a second user after receiving at least a portion of the premium payments to create a joint premium payment amount, a joint guaranteed minimum retirement income amount and a joint retirement income amount shared by both individuals.

22. The process of claim 7 wherein the step of transmitting the retirement income amount includes the step of transmitting the retirement income amount for a period encompassing at least one of a life of the user and a certain time period.

23. The process of claim 7 further comprising the step of transmitting a commuted value of at least a portion of the received premium payments and an invested premium payment to the user before the end of the accumulation period in response to a request by the user, wherein the commuted value is adjusted to include a discounting impact of an investment return on the invested premium payment and an appropriate predetermined surrender charge.

24. The process of claim 23 wherein the step of receiving the premium payments further comprises the steps of receiv-

ing a rider selection from the user and calculating the other of the predetermined guaranteed minimum retirement income amount and the premium payment based on the user's rider selection.

25. The process of claim 24 wherein the step of receiving the rider selection includes the step of receiving a selection of at least one of a disability rider, an unemployment rider and an early death rider.

26. A process for providing a user with periodic retirement income payments comprising the steps of:

receiving an input including two of a retirement date, a minimum retirement income amount and a defined premium payment amount for payment at each of a plurality of preset payment intervals;

calculating the other one of the retirement date, the minimum retirement income amount and the premium payment amount based on the input for an accumulation period defined by the retirement date and a current age of the user;

receiving a plurality of premium payments from the user during the accumulation period;

investing the received premium payments in an account in a manner consistent with one or more predefined objectives during the accumulation period to realize a retirement income amount; and

transmitting the retirement income amount to at least one of the user and a designated receiver at a designated time after the end of the accumulation period wherein the retirement income amount includes a predetermined guaranteed minimum retirement income if the received premium payments are received according to a predetermined premium payment schedule, and wherein one of the predetermined minimum retirement income amount and the premium payment amount is defined by the user.

27. The process of claim 26 wherein the step of calculating the premium payment amount includes the step of calculating the premium payment amount using at least one equity performance factor.

28. A process for investment comprising the steps of:

receiving a premium payment amount from a user at each of a plurality of predefined intervals over an accumulation period during employment at a first employer during a first part of the accumulation period;

receiving the premium payment amounts from the user during employment at a second employer during a second part of the accumulation period;

investing the received premium payment amounts during the accumulation period; and

transmitting a retirement income amount to at least one of the user and a designated receiver at a designated time after the end of the accumulation period, wherein the retirement income amount includes a predetermined guaranteed minimum retirement income amount if the total received premium payment amounts were received according to a predetermined premium payment schedule, and wherein one of the predetermined guaranteed minimum retirement income amount and the premium payment amount is defined by the user.

29. A quoting system comprising:

means for receiving as an input two of a retirement date, a minimum retirement income amount and a defined premium payment amount for payment at each of a plurality of preset payment intervals; and

means for calculating the other one of the retirement date, the minimum retirement income amount and the defined premium payment amount, wherein the user receives the guaranteed minimum retirement income when the user reaches the retirement date if the user pays the defined premium payment amount at each of the preset payment intervals.

30. The quoting system of claim 29 wherein the means for calculating the other of the minimum retirement income amount and the premium payment amount is based on at least one of a mortality rate and a predetermined interest rate.

31. The quoting system of claim 29 further comprising means for presenting the user with a signature-ready application for electronic transmittal.

32. The quoting system of claim 29 further comprising means for presenting the user with an application including the received input and the calculated guaranteed minimum retirement income amount or the calculated premium payment amount.

33. A system for providing a user with a plurality of periodic retirement income payments comprising:

a variable deferred annuity module to receive a predetermined premium payment from the user at each of a plurality of predetermined payment intervals to invest the premium payments and to output an income generating payment; and

a variable immediate annuity module to receive the income generating payment and to output a periodic retirement income payment amount wherein the periodic retirement income payment amount is greater than or equal to a predetermined guaranteed minimum periodic retirement income payment amount if the premium payments received are received according to a predetermined premium payment schedule, and wherein one of the predetermined minimum periodic retirement income payment amount and a premium payment amount is defined by the user.

34. The system of claim 33 further comprising a flexible premium funding account module means to invest a received premium payment into a user flexible premium funding account and to output one of a predetermined premium payment and a portion of a predetermined premium payment to the variable deferred annuity module.

35. The system of claim 33 further comprising a surrender charge module to receive as a surrender input at least one of a cash value of the invested premium payments from the variable deferred annuity module and a market commutation value or an assignment value of the flexible premium funding account from the flexible premium funding account module, to add an appropriate surrender charge to the surrender input and to output a cash surrender amount to the user in response to the received surrender input.

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C.

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(54) **METHOD AND APPARATUS FOR DISTRIBUTING DOCUMENTS ON AN EVENT-TRIGGERED BASIS THROUGH A COMMUNICATIONS NETWORK SYSTEM**

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(52) **U.S. Cl.** **705/35**; 705/36; 705/9

(57) **ABSTRACT**

A method and apparatus for automatically distributing, recording, monitoring, and re-creating communications to participants of an employee benefit plan, via the Internet or automated application. The method and apparatus include a server having a database containing proprietary plan and plan participant information. A plan sponsor or administrator identifies a plurality of plan rules associated with the plan and plan participant information, and defines a plurality of event triggers associated with the plan rules. The method and apparatus searches for event triggers based upon the plan rules, which are pre-configured into the system. The event triggers are associated with specific plan communications medium. In an instance where an event trigger is initiated the method identifies a particular plan communications medium for viewing by the plan participants, and determines a plan participant recipient listing to receive the plan communications medium. The plan communication medium is automatically provided to client computers' of the listed plan participants via a communications network. The listed participants must access the communications network and confirm having viewed the plan communications medium prior to accessing any other attributes of the plan. Where a listed participant fails to confirm viewing the plan communications medium over the communications network, a hard copy is automatically sent. The invention permits the plan sponsor to execute its fiduciary obligation to ensure delivery and communication of all relevant employee benefit plan documents without human intervention.

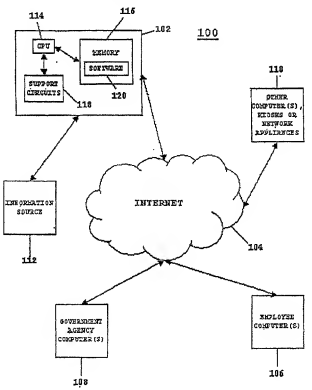
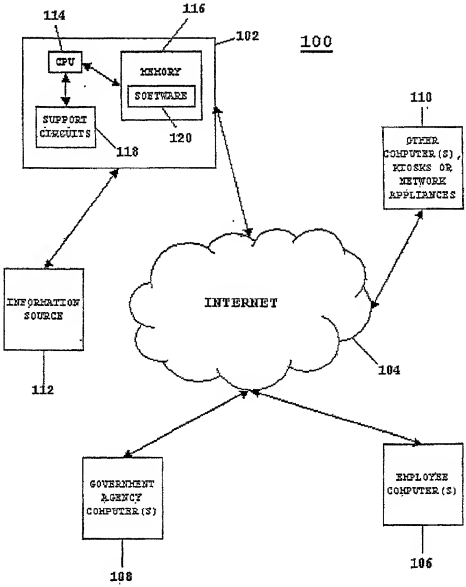


FIGURE 1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INTERNET
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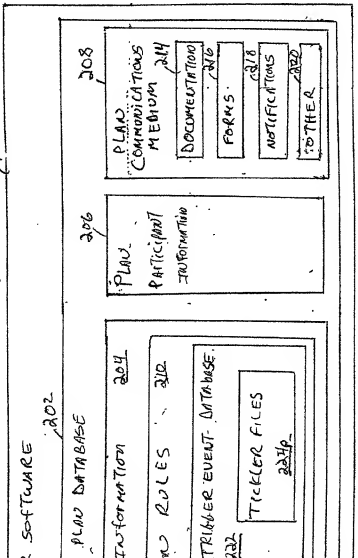
104
GOVERNMENT AGENCY COMPUTER(S)
EMPLOYEE COMPUTER(S)
108
106

C.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PLAN INFORMATION
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PLAN RULES
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TRIGGER EVENT DATABASE
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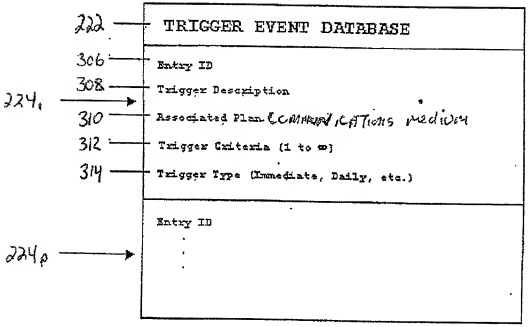
TICKLER FILES
214
206
PLAN PARTICIPANT INFORMATION
208
PLAN COMMUNICATIONS MEDIUM
214
DOCUMENTATION
216
FORMS
218
NOTIFICATIONS
220
OTHER
222

FIG. 2

C.

FIGURE 3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Entry ID
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Trigger Description
224₁
310
Associated Plan (COMMUNICATIONS medium
312
Trigger Criteria (1 to ∞)
314
Trigger Type (Immediate, Daily, etc.)
Entry ID
224ₚ

400

FIG. 4

402 WHAT	404 WHO	406 WHEN	408 REQUIRED FIELDS	410 TYPES OF PLANS APPLICABLE TO	412 NOTES
Enrollment Form	eligible employees based on age, service, classification, etc. per plan document	before entry date	Name of Employee Social Security Number Date of birth Date of hire Employer's EIN 3-digit Plan Number Plan's minimum age requirement Plan's minimum service requirement Hours of service Breaks in Service Employment Status	all plans which require or permit employee contributions; some that do not	won't apply to most defined benefit plans or money purchase plans
Beneficiary Designation Form	eligible employees alternate payees beneficiaries of deceased participants, if plan has provisions for	before entry date and as requested	Name of employee Employee marital status Social Security Number Employer EIN 3-Digit Plan Number Employee's enrollment date Date of request Employee Date of birth Employment Status	almost all plans	some defined benefit plans will pay no benefit in the event of death a single participant and only benefit to spouse if married and such a plan would not require this form
Spousal Consent to Naming Another Beneficiary Form	eligible employees	as part of beneficiary designation form or separate form	Name of employee Employee marital status Social Security Number Employer EIN 3-Digit Plan Number Prior consent on file? Employee Date of birth Employee date of enrollment Employee date of hire Employee's employment status	plans which permit naming another beneficiary (most plans do)	

C.

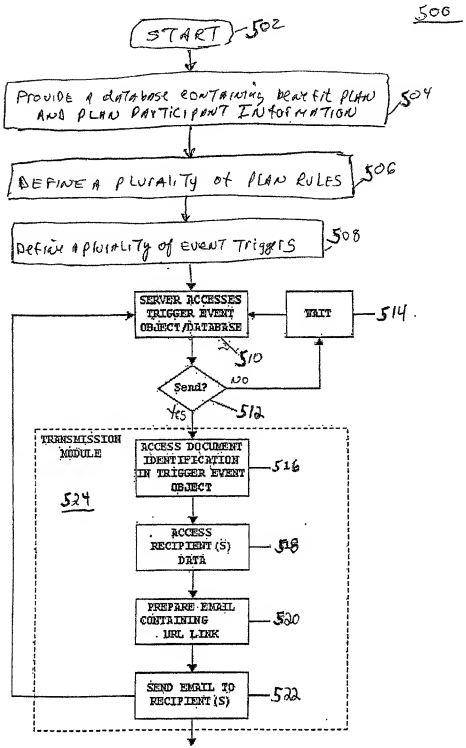
500
START
502
PROVIDE A DATABASE CONTAINING BENEFIT PLAN AND PLAN PARTICIPANT INFORMATION
504
DEFINE A PLURALITY OF PLAN RULES
506
DEFINE A PLURALITY OF EVENT TRIGGERS
508
SERVER ACCESSES TRIGGER EVENT OBJECT DATABASE
WAIT
514
510
Send?
NO
YES
512
TRANSMISSION MODULE
524
ACCESS DOCUMENT IDENTIFICATION IN TRIGGER EVENT OBJECT
516
ACCESS RECIPIENT(S) DATA
518
PREPARE EMAIL CONTAINING URL LINK
520
SEND EMAIL TO RECIPIENT(S)
522

FIG. 5A

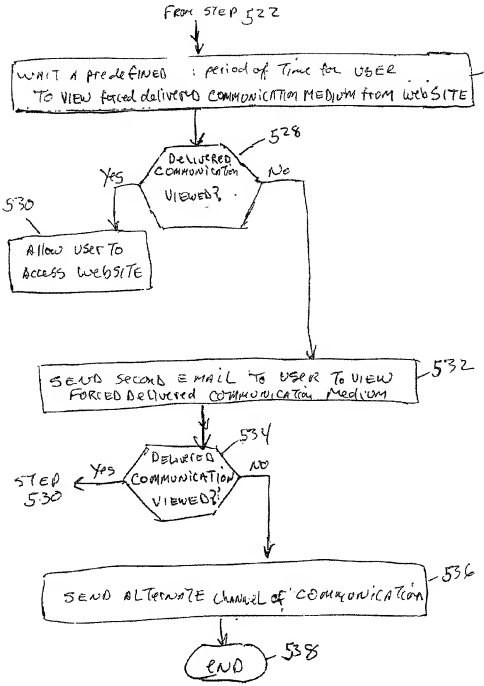
FROM STEP 522
WAIT A PREDEFINED PERIOD OF TIME FOR USER TO VIEW FORCED DELIVERED COMMUNICATION MEDIUM FROM WEBSITE
526
528
DELIVERED COMMUNICATION VIEWED?
Yes
No
530
ALLOW USER TO ACCESS WEBSITE
SEND SECOND EMAIL TO USER TO VIEW FORCED DELIVERED COMMUNICATION MEDIUM
532
534
DELIVERED COMMUNICATION VIEWED?
Yes
No
STEP 530
SEND ALTERNATE CHANNEL OF COMMUNICATION
536
END
538

FIG. 5B

C.

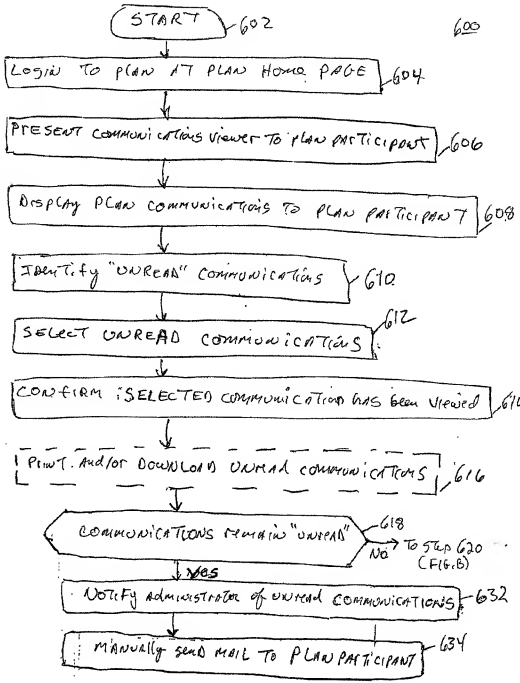
600
START
602
LOGIN TO PLAN AT PLAN HOME PAGE
604
PRESENT COMMUNICATIONS VIEWER TO PLAN PARTICIPANT
606
DISPLAY PLAN COMMUNICATIONS TO PLAN PARTICIPANT
608
IDENTIFY "UNREAD" COMMUNICATIONS
610
SELECT UNREAD COMMUNICATIONS
612
CONFIRM SELECTED COMMUNICATION HAS BEEN VIEWED
614
PRINT AND/OR DOWNLOAD UNREAD COMMUNICATIONS
616
COMMUNICATIONS REMAIN "UNREAD"
618
No
TO STEP 620 (FIG. 6B)
Yes
NOTIFY ADMINISTRATOR OF UNREAD COMMUNICATIONS
632
MANUALLY SEND MAIL TO PLAN PARTICIPANT
634

FIG. 6A

C.

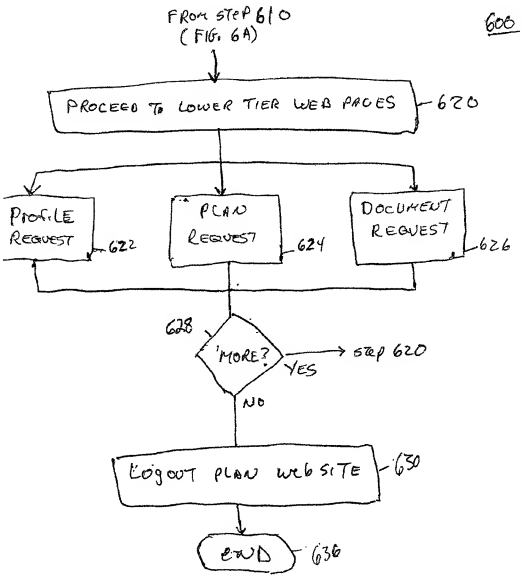
FROM STEP 610
(FIG. 6A)
600
PROCEED TO LOWER TIER WEB PAGES
620
PROFILE REQUEST
622
PLAN REQUEST
624
DOCUMENT REQUEST
626
628
MORE?
YES
STEP 620
NO
LOGOUT PLAN WEB SITE
630
END
636

FIG. 6B

C.

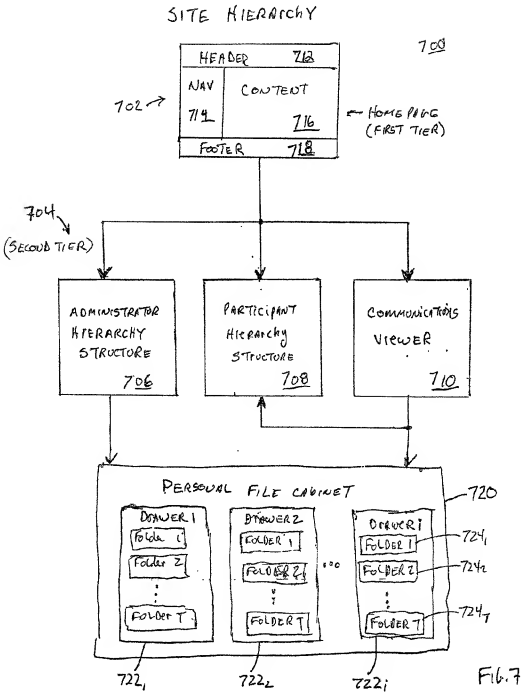
SITE HIERARCHY
700
HEADER 712
NAV 714
CONTENT 716
FOOTER 718
702
HOME PAGE (FIRST TIER)
704
(SECOND TIER)
ADMINISTRATOR HIERARCHY STRUCTURE 706
PARTICIPANT HIERARCHY STRUCTURE 708
COMMUNICATIONS VIEWER 710
PERSONAL FILE CABINET
720
DRAWER 1
DRAWER 2
DRAWER i
FOLDER 1
FOLDER 2
FOLDER T
724₁
724₂
724T
722₁
722₂
722i

Fig.7

C.

PARTICIPANT HIERARCHY 800

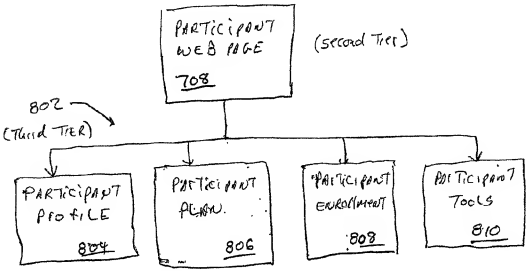

FIG. 8

ADMINISTRATOR SITE HIERARCHY

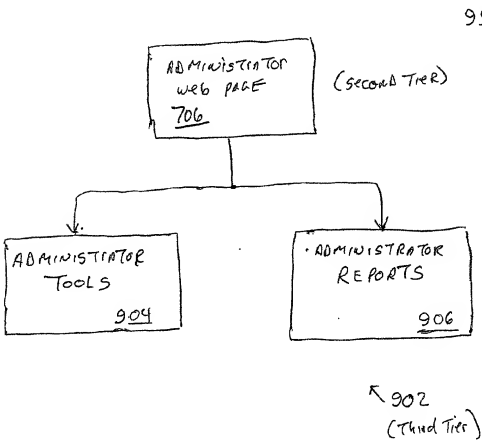

FIG. 9

METHOD AND APPARATUS FOR DISTRIBUTING DOCUMENTS ON AN EVENT-TRIGGERED BASIS THROUGH A COMMUNICATIONS NETWORK SYSTEM

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims benefit of U.S. Provisional Application No. 60/200,840, filed May 1, 2000.

BACKGROUND OF THE DISCLOSURE

[0002] 1. Field of the Invention

[0003] The invention relates to document delivery, reporting, re-creation, and monitoring systems related to employee benefit plans and human resource (HR) programs such as retirement, health and welfare, stock, fringe, cafeteria, orientation, employment, executive compensation, and the like. In particular, the invention relates to a method and apparatus for delivering, reporting, re-creating, and monitoring documents, for use by the employer, employee, and/or plan service provider, for such plans on an event-triggered basis through an internet-based and/or automated system, which is further consistent and in compliance with federal and state laws and regulations regarding the fiduciary and administrative obligation with respect to electronic communication, delivery, reporting, re-creation, and monitoring of documents as they relate to employee benefit plans.

[0004] 2. Description of the Background Art

[0005] Most employers (private, public sector, tax-exempt, union, and the like) offer retirement and other benefit plans and HR programs that are regulated by federal and state governments. The regulations generally require a plan sponsor to provide certain government agencies, as well as plan participants, timely reports and other documentation regarding plans. A sponsor's failure to deliver, report, track, store, monitor, and re-create plan documents or communications can be a breach of the sponsor's fiduciary duty, thereby subjecting that sponsor to adverse and costly legal exposure from employees, as well as legal and audit exposure from the IRS and other agencies of both federal and state government.

[0006] Presently, most of the record keeping and form generation process is performed using a manual system where forms and documents are self-identified (i.e., a human must know that an event has occurred that requires a federally mandated document) and then manually generated and printed on a periodic basis. The documents are then delivered to designated recipients using regular mail, hand, or interoffice delivery. Plan sponsors annually pay billions of dollars annually for iterative manual systems.

[0007] Therefore, a need exists in the art for an automated document preparation, delivery, reporting, and monitoring system that has the intelligence to identify in one instant, an event that has occurred with respect to a particular employee benefit plan, a particular employee who must receive a particular document, and a particular manner and time for document delivery. In addition, there is a need in the art for the ability to provide a historical and searchable paperless "paper trail" of the artificial intelligence that was used to transact and fulfill the aforementioned system. Furthermore, a need exists in the art for a system to fulfill the fiduciary, administrative, and federal requirement to timely deliver documents to plan participants and other entities in a secure manner. Moreover, a need exists in the art for a system that can store and re-create any such delivered, reported, and monitored document for the employer, employee, and any service provider to the plan.

SUMMARY OF THE INVENTION

[0008] The invention provides a method and apparatus for providing timely generation and transmission, reporting, monitoring, re-creation of documents using an event-triggered, Internet or automated-based system (e.g., Intranet, local and wide area networks (LAN/WAN)), such that the system is compliant with all federal, fiduciary, and administrative mandates imposed on an employee benefit sponsor. One embodiment of the invention is a system that complies with reporting and disclosure requirements for employee benefit plans, e.g., ERISA, IRS, other federal law and state reporting and disclosure requirements and electronic communications regulations, as they relate to employee benefit plans. The system is advantageous over the prior art since it offers simplified compliance with federal and state rules (through an artificial intelligence that can identify a particular event that has occurred with respect to a particular employee benefit plan, and a particular employee who must receive a particular document and in what manner and when). Furthermore, the system has the ability to provide a historical and searchable paperless "paper trail" of employer, employee, and plan service provider activity. As such, human error is virtually eliminated; audit/legal exposure is lessened and expenses are controlled; potential penalties assessed by a federal court or government agency for non-compliance can be avoided; HR professionals are freed up to focus on other critical business tasks; upwardly spiraling printing, delivering, and document storage costs are contained; and employee morale and satisfaction is improved.

[0009] More specifically, the system uses a "tickler file" structure to generate triggering events that ensure timely generation, reporting, monitoring, delivery, and re-creation of documents and notices to plan participants and government agencies, all in compliance with federal, regulatory, fiduciary, and administrative mandates. The system uses a tickler file generation module to prepare tickler files comprising a date/time/event indicator, recipient, a document designator, and the like. Upon a date/time/event occurring, the system prepares electronic mail (e-mail) to a designated recipient and provides a link to a Web-hosted application. A Web-based interface requires confirmation that the notified participant has read selectively linked web pages prior to further interaction with the system. The participant must confirm receipt of any forced delivered document. Once the system has confirmed that a delivered communication has been read, the user is free to retrieve documents, enter information, update information, signature verification, and the like from the system web site. That is, the participant is required to acknowledge, through electronic signature, the forced delivered documents before availing himself of any other attributes of the system.

[0010] The system rounds out, and ensure compliance with the employer's federal fiduciary and administrative obligations to ensure delivery to a plan participant (e.g., an employee). Specifically, the system recognizes that a par-

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ticipant has not ever linked to and viewed forced delivered communications (e.g., the participant has deleted the e-mailed link, ignored the message, and/or never accessed the Web). In such instance, the system uses a pre-configured cut-off date to notify HR that a particular participant has not read a necessary document, and subsequently the system, without prompting, converts the document that should have been read into a hard copy and delivers that document to the participant. The system, in one embodiment of the invention, is simply the outsourced technology of in-house benefit plan administration and federal compliance work.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The teachings of the present invention can be readily understood by considering the following detailed description in conjunction with the accompanying drawings, in which:

[0012] **FIG. 1** depicts a high level block diagram of the system of the present invention;

[0013] **FIG. 2** depicts a block diagram of one embodiment of the system software of the present invention;

[0014] **FIG. 3** depicts a tickler file format;

[0015] **FIG. 4** depicts a table providing various categories and subcategories of illustrative communications that are enabled by the present invention;

[0016] **FIGS. 5A and 5B** together depict a flow diagram of an event-triggering process for transmitting documents;

[0017] **FIGS. 6A and 6B** together depict a flow diagram of a document request and delivery process;

[0018] **FIG. 7** depicts a block diagram of a hierarchical plan structure of the present invention;

[0019] **FIG. 8** depicts a block diagram of a hierarchy for a participant structure of the hierarchical plan structure of **FIG. 7**; and

[0020] **FIG. 9** depicts a block diagram of a hierarchy for an administrative structure of the hierarchical plan structure of **FIG. 7**.

[0021] To facilitate understanding, identical reference numerals have been used, where possible, to designate identical elements that are common to the figures.

DETAILED DESCRIPTION OF THE INVENTION

[0022] One embodiment of the invention permits employee benefit plan sponsors to deliver, report, monitor, re-create, and track federally mandated and routine plan communications through a cost-effective web-hosted and/or automated application, from the perspective of the employee, employer, and plan service provider. The system also forms a human resource department's repository for all federal and state imposed, as well as routine plan communications (creating a necessary historical plan document and employee database). Further, employees can self-service their employee benefit plan and personnel information through electronic means: on a 24-hour basis, 7 days a week, 365 days a year. The system has the intelligence to provide the following:

[0023] For a Plan Sponsor:

[0024] Automated identification of occurrence of life or other triggering event; identification of affected employee; identification of pertinent document; and timely electronic (or hard copy in the event of non-electronic use) delivery of documents; daily and tabulated status of read/delivered plan communications; tracking of employee activity; permanent records that can be instantly queried, retrieved, and re-created; timely distribution of plan amendments; audit/litigation protection and support; and ability to provide multilingual plans, documents, and other communications.

[0025] For a Plan Administrator:

[0026] Automated delivery of communications, upon occurrence of life, plant, or other triggering event; daily tabulated status of read and/or delivered plan communications; permanent records that can be queried and retrieved online; timely distribution of plan amendments; audit/litigation support by maintaining strict audit trails of participant activities; quicker benefits enrollment and update capabilities; and reduced number of questions from plan participants.

[0027] For a Plan Participant (e.g., Employee):

[0028] Personal File Cabinet provides instant access to current and historical plan documents and other communications; on-site and on-line self-service capabilities; retirement savings modeling, with Web links to the plan investment manager; quicker and efficient access to HR personnel.

[0029] The invention assists employee benefit plan sponsors with the automated delivery of all federal and state-mandated documents, as well as routine plan communications through an illustrative web-hosted application. The system uses a configurable tickler file intelligence for delivering those mandated documents and communications in a timely manner, via the Internet.

[0030] The invention is illustrated as a web-hosted solution with its primary function to assist with the automated delivery, reporting, re-creation, and monitoring of all federal and state-mandated documents as well as routine plan communications that almost 100 percent of the nation's employee benefit plan sponsors currently hand deliver, manually record, and physically store. The system has the capabilities to index, retain, preserve, retrieve, and reproduce electronic records (e.g., by employee, date, type of plan, communication, and the like), and the system surpasses the government's minimum standards relating to electronic communication with respect to employee benefit plans. The system can function as a stand-alone system or on a plan sponsor's existing information technology (IT) infrastructure. Although the system is illustratively described as a web-hosted application system, the system may also be implemented on any communication network such as an Intranet, local and/or wide area networks (LAN/WAN), and the like.

[0031] **FIG. 1** depicts a high-level block diagram of document delivery system **100** in accordance with the present invention. The system **100** comprises a server **102**, the Internet **104**, employee computers **106**, government agency computers **108**, and other computers or network appliances **110**. The server comprises a central processing unit **114**, memory **116**, and support circuits **118**. The support

circuits **118** include well-known computer circuits such as clocks, cache, input/output circuits, network interface cards, and the like. The memory **116** may include random access memory, read only memory, removable memory, disk storage, and the like. The memory **116** stores the software **120** that causes the server **102** to operate in accordance with the present invention. The server **102** operates as a general purpose server until the CPU **114** executes the software **120** to create a specific purpose server that performs document distribution and other user notification functions of the present invention. The information that is distributed by the system is generally provided by an information source **112** that contains a database of forms, notices, documents, an employee record database, and events pre-programmed and configured by Employee Benefits Consultants who have queried the plan sponsors, plans, and programs. The operation of the system **100** is described in detail below.

[0032] The network that interconnects the computers **106**, **108**, **110** and the server **102** is shown as the Internet **104**, but may be any form of communications network capable of propagating documents to particular addresses. Moreover, a user may access the Internet **104**, illustratively from a remote hand held device or a home computer, via wireless communications, a modem, or any other communication medium providing Internet access to view documents and use the self-service features.

[0033] The system software **120** is organized into three major components, each of which is distributed to a different place or places in the system network. A first layer is a user presentation layer, which supports graphical user interface (GUI) and application-specific entry forms or interactive windows. The user presentation layer is located for example, on the plan participant's client based computer **106** or hand held device. The second layer is a business logic layer, which provides the sets of business rules that the system **100** follows to implement the plan. The business logic layer is located on the server **102** and contains the plan rules and defined triggers to manage document distribution to plan participants. Furthermore, the business logic layer acts as the server for client requests and determines what data is needed, where the data is located, and acts as a client in relation to programming that is located on a different data source. The third layer is a database access layer, which includes the database and programs to manage access to the data.

[0034] As described in detail herein, aspects of the preferred embodiment pertain to specific method steps, which may be implemented on computer systems. In an alternative embodiment, the invention may be implemented as a computer program-product for use with a computer system. The programs of the program-product define the functions of the preferred embodiment and may be delivered to a computer via a variety of signal-bearing media, which include, but are not limited to, (a) information permanently stored on non-writable storage media (e.g., read-only memory devices within a computer such as CD-ROM disks readable by CD-ROM drive); (b) alterable information stored on writable storage media (e.g., floppy disks within diskette drive or hard-disk drive **114**); or (c) information conveyed to a computer by a communications medium, such as through a computer or telephone network, including wireless communications. Such signal-bearing media, when carrying computer-readable instructions that direct the functions of the present invention, represent alternative embodiments of the present invention.

[0035] **FIG. 2** depicts a block diagram of one embodiment of the system software **120** of the present invention. The system software **120** includes a benefit plan database **202** having plan information **204**, plan participant information **206**, and plan communications medium **208**. The plan information **204** comprises plan rules **210**, which are associated with a trigger event database **222** having a plurality of "tickler files" 224_p (see also **FIG. 3**). The plan participant information **206** includes data for each plan participant, such as name, address, date-of-birth, social security number, years of service, job description, beneficiaries, and any other pertinent fact necessary for participating in the plan. The plan communications medium **208** include documents **214**, plan forms **216**, notifications **218**, and other communications **220** deemed pertinent to the plan. The plan communications medium **208** are automatically delivered to the plan participants for their review as discussed below.

[0036] The system **100** operates on an event-triggered basis in response to information in the "tickler files" **224**. In particular, the software **120** includes a "search engine", which utilizes a repository of the rules **210**, which are plan specific. In particular, the rules **210** are associated with one or more of the event triggers, which generate and automatically deliver the plan communications medium **208** to one or more plan participants, administrators, and the plan sponsor management.

[0037] **FIG. 3** depicts a tickler file format. In particular, **FIG. 3** depicts an illustrative structure for the tickler files **224** within the trigger event database **222** of **FIG. 2**. These files are produced by Employee Benefit Consultants through interaction with a tickler file creation module. This unique trigger event file is created only after examining specific parameters for each employee benefit plan stored in the system. The trigger event database **222** comprises a plurality of file entries for each tickler file **224**, through 224_p. Each file entry comprises an entry identification (ID) **306** (e.g., a chronological tag created by the system), a trigger description **308** (e.g., an employee's hiring date), an associated plan communications medium **310** such as document or notice identifier (e.g., an employee's enrollment form into a 401(k) plan), trigger criteria **312** (e.g., after three months from date of hire), and a trigger type **314** (e.g., immediate or daily).

[0038] Two types of triggers are implemented by the system **100**. The first type of trigger is a "program" trigger. Program triggers are computer programs written and scheduled to run at certain times (e.g., hourly, daily, and the like) to perform specific tasks. For example, a program may be written to determine if an employee has greater than six months service, by comparing the employee start date against the current date. If a triggering event (i.e., a business rule) for sending a 401(k) enrollment form after six months of service is implemented into a 401(k) plan, then the program would automatically set up the delivery of the enrollment form to the employee.

[0039] The second type of trigger is an "event" trigger. Event triggers are programs designed to launch automatically when some event (e.g., changing a value in a database field) has occurred so that the program can respond to it. For example, if an employee's home address is modified, then

the event of changing that field automatically "triggers" the program to identify whether that change is relevant with respect to a delivery of any document under any employee benefit plan or HR program. As such, the event trigger automatically initiates the delivery of Form W-4 because of the change in the employee address field.

[0040] **FIGS. 5A and 5B** together depict a flow diagram representing the operation of one embodiment of the present invention in an automated notification mode. The automated method **500** operates on an event-triggered basis. Referring to **FIG. 5A**, the method starts at step **502** and proceeds to step **504** where a unique and proprietary database (per employer) containing benefit plan and plan participant information is stored in the server. In step **506**, the plan sponsor and/or administrators define the proprietary plan rules associated with the benefit plan and plan participant information. Furthermore, in step **508**, the plan sponsors and/or administrators define event triggers based on the plan rules and the participant information. Once the plan database is defined with all the rules and event triggers, the benefit plan database is ready for operation and interaction for that specific employer. The uniqueness of the system is that the system is employer specific (i.e., capable of identifying the particulars associated with one employer over others). In particular, the system treats each employer on an individual basis based on each employer's respective internal policies and plan rules.

[0041] The method **500** proceeds to step **510**, where the server accesses a trigger event object. The trigger event object information is inspected to determine if any notices or documents are to be sent to users (e.g., government agencies, plan sponsors, employees, and the like) at this time. In one embodiment, there is a nightly read of plan sponsor and HR databases. The method **300** searches through the databases to determine if certain events have occurred (e.g., someone turns age **35** that night).

[0042] The method **500** queries at step **512** whether a transmission is required (e.g., a notice regarding turning **35** years old). If no plan communications medium (e.g., document, form, e-mail notification, report) are to be sent, the method **500** proceeds to step **514** and waits for a predefined period before returning to step **510**. If a transmission is required, the method **500** launches a message transmission module **524**. In effect, the message transmission module is launched on an event-triggered basis.

[0043] The transmission module **524** constructs the plan communication medium that is to be delivered. The transmission module **524** begins at step **516** by accessing the trigger event object entry that has identified a need for transmission. Step **516** identifies the plan communications medium (e.g., document or notice) that requires transmission.

[0044] At step **518**, the method **500** accesses the recipients' list. Each plan communications medium is formatted to provide relevant information regarding either general information for all the participants, or specific information for a particular participant. For example, communications that are intended for distribution to all the participants have general information provided in a header of the communication. Such general information is stored in various fields of the database and is copied into the body of the communications medium as required. Similarly, information that is specific to a plan participant is copied from various fields in the plan participant database as required, and attached to the body of the plan communications medium to generate a completed communications for delivery.

[0045] In step **520**, an electronic mail (e-mail) message is prepared. The e-mail includes a link to a web-hosted application where the plan communications medium (e.g., document/notice) can be viewed. At step **522**, the e-mail message is sent to the recipients on the recipient list, and the method **500** proceeds to step **526**.

[0046] Referring to **5B** in step **526**, the method **500** waits a predefined period of time for each recipient on the list to confirm that each has viewed the appropriate forced delivered communication medium. That is, the user is invited to access selected web pages in the plan web site, which are pertinent to that particular user or participant. In step **528**, a determination is made as to whether the user has accessed, acknowledge, and electronically signed an affirmation on the selected plan web pages. That is, if the user fails to go to web-hosted application after a predefined period of time, the system recognizes that the user has not viewed the plan communications medium.

[0047] If the determination of step **528** is answered affirmatively, then the method **500** proceeds to step **530**, where the user is enabled to access the entire web site that is dedicated to such participant. If, however, in step **528**, the determination is answered negatively, then the method proceeds to step **536**.

[0048] In step **536**, an alternate communication channel already pre-configured by the system (e.g., hard copy sent by mail, courier, priority mail, and the like) is used to notify the listed plan participant and/or provide the relevant subject matter (such that the employer's federal, fiduciary, and administrative obligations are carried out without further human invention). Optionally, in steps **532**, a second e-mail may be sent to the listed recipient prior to sending the communication by an alternate communication channel. In step **534**, the system monitors whether the selected web pages have been viewed. If, in step **534**, the determination is answered affirmatively, then the method proceeds to step **530**, where the recipient is allowed to view participant related web pages.

[0049] If, however, the determination in step **534** is answered negatively, then the method proceeds to step **536** where the alternate communications channel is provided. Once the listed participant has either viewed a event triggered communication or related web pages, or has been sent a hard copy notification or document, the method **500** ends at step **538**.

[0050] The rules based trigger event system enables the system **100** to automatically present documents to plan participants. In one embodiment, the rules are employed by using simple Boolean algebra to determine if either a program or event trigger should be executed. Using the forgoing trigger event based system, a plan sponsor (e.g., employer) will meet all reporting and disclosure requirement deadlines in an automated manner, once those deadlines are pre-configured by the plan sponsors and system administrators.

[0051] Moreover, the programming of the rules is adaptive to for modification, due to changes in the federal and state laws, or other plan changes. As such, the system adminis-

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trators are enabled to modify the rules as required. For example, a particular ERISA law may change, which requires fewer years of service for an employee to receive a particular benefit. The system administrators are capable of modifying the rule containing such years of service parameter. As such, the plan participants and governmental agencies are able to receive plan documents and communications in a timely and cost effective manner.

[0052] **FIG. 4** depicts a table **400** providing various categories and subcategories of illustrative communications that are enabled by the present invention. Table **400** illustratively includes documents/notices, recipients, types of plans that require such notices, and when the document/notice should be sent to the recipients. The table **400** illustratively focuses primarily on retirement plans, but the system **100** can support trigger-event delivered documents and notices for all types of employee benefit plans, and table **400** should not be considered as limiting.

[0053] The first column **402** lists a type of form such as an enrollment form, beneficiary designation form, a notification form, and the like. The second column **404** provides for whom the form pertains. For example, the enrollment form shown as the first entry in column **402** pertains to eligible employees based on age, service, classification, and the like. The third column **406** provides when the form is to be completed. For example, the enrollment form is to be completed before the entry date. The fourth column **408** specifies the required fields that must be completed in the form. All forms and notices require participant name, participant social security number, employer's identification number (EIN) and a plan number. Each form or notice also includes additional fields that are specific for the particular form. For example, the enrollment form includes fields for date of birth, minimum age requirement, years of service, and the like. The fifth column **410** provides the types of plans the form or notice is applicable to. For example, the enrollment form is applicable to all plans, which require or permit employee contributions, and some that do not. The sixth column **412** provides administrative notes. For example, the enrollment form does not apply to most defined benefit plans or money purchase plans.

[0054] **FIGS. 6A and 6B** together depict a flow diagram of a document request and delivery process. In particular, **FIGS. 6A and 6B** depict the operation of the system **100** in an interactive mode. The interactive method **600** begins at step **602** and proceeds to step **604**, where a user receives an email to access a plan web site beginning with a plan home page. The web site comprises a user interface, which provides a user with access to view plan information, documentation, and communications offered and sent by the plan sponsor.

[0055] The user is presented with the home page of the plan web site, where the user is requested to "logon" to the web site. Logins are tracked, so as to document and archive access, confirmation of receipt, and electronic signature. To ensure authorized access of the web pages, the entire web site or portions thereof may be password protected such that only authorized users may access the information available through the web site. Additional security is provided by minimizing user access rights to an as need basis, as well as authentication mechanisms. For example, there are different access levels for varying management levels at HR (from clerk to manager). Password expiration dates and minimum character length requirements may be implemented. Moreover, repeated login errors (e.g., three consecutive login attempts and failures) will result in the user from further attempting to login and a notice to a system administrator and the user of the three unsuccessful login attempts.

[0056] Providing various user classes further restricts user access rights. User classes include plan participants, system administrators, system managers, and a demonstration user. Plan participants are illustratively current or past enrolled employees who typically are the main users of the system **100**. System administrators manage the user business objects including the participants, plan, and communications. System managers have access to management reporting functions of the system **100**, while demonstration users are those users who are limited to a demonstration program of the plan and its features. Accordingly, the user class system provides additional security by limiting access to specific features of the system **100**.

[0057] Other, various security measures may be implemented to safeguard the system and user from privacy and against tampering of records. In one embodiment, all internet hypertext transport protocol (http) data is encrypted. For example, the system may implement a Secure Sockets Layer (SSL), which is a protocol created by Netscape Corporation for managing the security of message transmissions over the Internet. One skilled in the art can envision other encrypting techniques to secure the transfer of information over the Internet. Further security measures may include user session timeouts after a predetermined time of inactivity, non-access to new users until the new user is verified by an administrator, and the like.

[0058] Referring to **FIG. 6A**, after logging in to the plan home page in step **604**, the method **600** proceeds to step **606**. In step **606**, a communications viewer is presented to the participant. In step **608**, the communications viewer displays all relevant plan documents and/or communications sent to the plan participant. These documents and communications may be relevant to a particular class of plan participants or to all of the employees or participants of a particular plan sponsor. Furthermore, the plan sponsor or the plan administrators define the relevancy of any plan communication medium (e.g., document, notification, and the like) in accordance to the federal, state, and agency laws, and plan sponsor policies. While the communications viewer is not strictly a part of the site hierarchy, the communications viewer is utilized to allow the plan participants to retrieve unread documents and communications. The user of this inventive system **100** is prohibited from proceeding to any of the lower tier web pages until all of the unviewed documents and/or communications have been selected for review by the user.

[0059] In step **610**, the documents and communications are listed, for example, in chronological order of delivery, and are identified as having been either "read" or "unread". In step **612**, the user must select (e.g., click on a "read" button) each unread document or communication deemed relevant to satisfy the requirements of not having any unread documents or communications before proceeding to the lower tier web pages. That is, only those forced delivered documents deemed relevant by the plan sponsor must be read prior to proceeding to the lower tier web pages. In step

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614, the user confirms that the selected document or communication has been viewed. Alternately, the user may print or download the documents and/or communication to satisfy such requirement (shown in phantom in step 616).

[0060] The method then proceeds to step 618, where the system determines whether any other listed documents and communications remain in an unread condition. If, in step 618, the determination is answered affirmatively, then the method 600 proceeds to step 612, and continues through step 618, until the determination is answered negatively. Otherwise, the user is logged off after some period of time and in step 632, an event trigger notifies a system administrator regarding the unread, forced delivered document. Thereafter, in step 634 a hard copy of the notification is delivered manually to the participant, already pre-configured on the system.

[0061] If, however, in step 618, the determination is answered negatively, then the method 600 proceeds to step 620. In step 620, the user is returned to the home page and permitted to proceed to the lower tier web pages to view or search information regarding the user's plan or benefits.

[0062] Referring to FIG. 6B, in step 620, the user may select from the home page a number of options such as a profile request, a plan request, and a document request. If the profile request is selected, the method 600 proceeds to step 622 and displays a profile web page wherein a user may access, download, and/or modify their user profile (e.g., user name, address, social security number, and other personal identification information). If a plan request is selected, the method 600 proceeds to step 624. In step 624, the method 600 displays plans web page, where a user can access, view, search, and/or download plan descriptions. If a document request is selected, the method 600 proceeds to step 626 to view a document web page, which provides a list of documents that can be viewed or downloaded by the user. At step 628, the method 600 queries whether additional selections are to be made. If the query is affirmatively answered, the method 600 proceeds to step 620; otherwise, in step 630 is requested to log off, and method 600 ends at step 636.

[0063] The web pages of the present invention are designed to be user friendly by maximizing viewing areas and provide ease of navigation. The web site for each plan is structured in a hierarchical format beginning with a home page and linking, via a plurality of menus and/or hyperlinks, to subsystem web page views.

[0064] Furthermore, the method 600 is provided with the capability to determine whether there are any documents or communications that remain unread for a time exceeding some predetermined period due to user inactivity or failure to access the plan web site. The predetermined period may be a global standard time for all the unread messages. Alternately, the predetermined period may be based upon the user class, priority, or urgency of the document or communication. Surpassing the predetermined period is an event trigger. The event trigger is programmed to automatically notify a plan administrator to send the plan participant a hard copy of the plan communications medium, for example, by mail or courier. Alternately, the event trigger automatically sends a second e-mail to the plan participant prior to notifying the plan administrator. If the plan participant is unresponsive to the second e-mail after a second predetermined period of time, then the plan administrator is notified of the system's automatic delivery and recordation of hard copy to the participant without human intervention.

[0065] In this manner, the system 100 ensures that a user is automatically notified of any new plan information generated, by utilizing the trigger event database 202 and, more importantly, the system ensures the employer that a federally-mandated document is indeed delivered to the participant, as is required by law. Moreover, where the user is delinquent or does not have access to the Internet, the system 100 automatically provides hard copy documents and/or communications to the plan participant without any interaction of a human resource administrator.

[0066] FIG. 7 depicts a block diagram of a hierarchical plan structure 700 of the present invention. The hierarchical plan structure 700 is embodied in a plan web site of the present invention, which is proprietary and unique to a particular entity such as a corporation, governmental agency, or any other facility that provides one or more employee benefit programs for the particular entity's employees, owners, families, and the like. A particular entity's plan web site may be installed at the entity's facilities or hosted by a service provider on the illustrative system 100 as shown in FIG. 1.

[0067] In one embodiment, the plan web site comprises a plurality of web pages, which are accessed in a hierarchical order for categorizing plan information. The web pages are written in HTML, which is displayed in a web browser format such as a NETSCAPE® browser or a MICROSOFT INTERNET EXPLORER® browser. The information is presented in various tiers beginning with general information at a plan home page 702 and progressively provides more categories and detailed information as the user accesses lower tiered web pages.

[0068] The plurality of web pages are designed with the same format throughout the hierarchical structure, thereby providing consistency so that the users may become easily acclimated to navigating through system. For example, in one embodiment a plan home page 702 and respective lower-tier web pages 704 each comprise a header section 712, a footer section 718, a navigation menu section 714, and a main contents section 716. The header section 712 is located on the top of the web page and is used to display the product and/or particular entity logo. The footer section 718 is located on the bottom of the web page and is used to display optional information according to each client's preferences for the plan. The navigation menu section 714 is located on the left side of the page. The navigation menu section 714 of the home page 702 illustratively contains a login form having input elements for the participant's user name, ID number, personal identification number (PIN), password, help button, and the like (not shown). The main content section 716 displays informational or welcome messages concerning client-specific information and any other viewable content material. As such, each web page 700 contains information concerning the current participant, plan, and state of a user's session. Furthermore, one skilled in the art may envision other embodiments of the web pages that provide viewing and navigational capabilities.

[0069] Referring to FIG. 7, the hierarchical structure illustratively depicts the home page 702, which is a first tier page, and three lower tier web pages 704, which are categorizes as second tier web pages. From the home page 702,

the user may select and view lower tier web pages **704**, such as one or more administrator web pages **706**, participant web pages **708**, and a communications viewer **710**, which allows an administrator or participant to view documents and notices sent by the system **100**. Furthermore, when available, links to other web pages (i.e., third tier information) may be optionally selected and viewed from each of the second tier web pages, and so on down the hierarchical system structure. As such, a user may navigate up and down the hierarchical structure to view plan information and notifications as required.

[0070] **FIG. 8** depicts a block diagram of a hierarchy for a participant structure of the hierarchical plan structure of **FIG. 7**. In particular, the participant web page **708**, which is located in the second tier of **FIG. 7**, is illustratively linked to four third tier web pages **802** containing plan information from which a user may select. These third tier web pages **802** include a participant profile web page **804**, a participant plan web page **806**, a participant enrollment web page **808**, and a participant tools web page **810**.

[0071] The participant profile web page **804** allows a participating user to access web pages (e.g., fourth tier and progressively other lower tier web pages) associated with viewing and managing their currently stored plan profiles. The participant profile may contain information such as name, address, date of birth, dependent information, email address, contact information, and any other relevant employee and plan information. A main navigation menu allows a user to view or update their current profile, as well as change a personal identification number (PIN). When a user updates his or her profile, the system will only allow read access of the profile information by another user while the profile is being updated. During the update, the current profile is copied and saved. The user is presented with fields containing the current information, which may be modified. Once the profile information is modified, the user "clicks" on an update button to save the information to a new update file. In a deferred update scenario, the update file is sent to an administrator for review and update. In a real-time scenario, the previous profile information is archived and the new update file is sent to the storage server, which becomes the "new" current profile information.

[0072] The participant plan web page **806** is an entry point for allowing a participant to access the web pages associated with displaying and managing the plans for which they are currently eligible, as well as any communications associated with each plan. A list of eligible plans associated with a participant (that is, only those plans relevant to the particular employee) is presented so that the user may "drill-down" to the plan's general information, communications, and optional external account access. The communications displayed under each plan's page are only those which are common to the plan, are eligible for the participant to view, and which the participant has read or viewed using the communications viewer **710**.

[0073] The web pages associated with certain types of plans and communications that can be managed under the system **100** may include 401(k) plans, stock option plans, health plans, and the like. The aforementioned employee benefit plans are mentioned for illustrative purposes only and should not be considered as limiting. Additional plans may include pension plans, portfolio analysis, HR programs, or any other plan or program deemed desirable by a plan sponsor. Eligibility for each plan is determined on a plan-by-plan basis and pre-configured into the system, and each user must meet all eligibility requirements as defined under each plan in order to have access via the plan page. Plan communications may include static HTML communications, such as a plan summary, summary plan description, plan eligibility rules, schedules, frequently asked questions; forms, such as enrollment, investment election, beneficiary designation, and the like; and template communications, such as letters, personalized notifications, stock option awards or agreements, and the like. These plan web pages are static HTML. As such, no server-side processing is required for any elements associated with the plan pages.

[0074] The participant enrollment web page **806** allows the user to display, manage and enroll in various health (e.g., medical, dental, and vision), insurance and disability plans (e.g., long-term disability, flexible spending accounts), and any other benefit plans deemed desirable by the plan sponsor, and which the user may be currently eligible. In one embodiment, the enrollment page **806** becomes active and available during a pre-defined enrollment period, and provides a central location for the most current benefit communications and enrollment forms. Eligibility is determined on a benefit-by-benefit basis, and each user must meet all eligibility requirements as defined under each benefit in order to have access via the enrollment page **806**.

[0075] The participant tools **810** provide the user with a set of basic tools for managing their benefits and communications. Each tool is singular in function and allows the user to quickly find and extract the necessary information from their plan or benefit documentation. In the event that the tools are unable to provide a definitive answer for the participant, the system **100** provides links to the plan documentation or a benefit administrator on each web page of the particular plan.

[0076] The participant tools **810** include a communications search tool and a historical archive of documents and communications. The communications search tool permits a participant to search through documents and communications based on one or more words or phrases pertaining to a particular plan or benefit. A result list is generated where some of the results may be hyper-linked to the actual document or communication for in depth review. Searches are performed, for example, by a search engine using database development software such as COLD FUSION®, manufactured by Allair LLC, which allows for full-text indexing and search capability of documents and data sources. Such search engines are well known in the art, and are discussed herein for completeness.

[0077] The historical archive allows a participant or user to access and isolate each historical document and communication. A historical document or communication is one that has been delivered as a result of a plan event and viewed by the participant with the communications viewer, or one that is available to be viewed regardless of eligibility in the relevant plan or benefit such as the summary plan document. In addition, the archived documents are stored in the system to allow the plan sponsor to retrieve and re-create such documents upon request, to illustratively satisfy any governmental or agency legal requirements.

[0078] Referring to **FIG. 7**, a"Personal File Cabinet" (PFC) **720** is optionally available on the web site for access

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by the participants and the plan administrators. The PFC **720** provides instant access to current and historical plan, benefit, and other communications. The PFC functions as a personal assistant, which keeps complete audit trails for documents based on who sent such document, who viewed the document, and what the document looked like. In particular, the PFC **720** keeps an archive of all relevant HR documents that have ever been issued to a participant. All documents issued to any given participant are automatically archived, including blank forms (for example, a blank Form W-4). The audit information contains time, date, IP address, user ID, as well as customized document related information.

[0079] An administrator of the plan sponsor or employer controls the PFC. The plan sponsor or employer administrator controls what is designated as a relevant document for archival purposes. A document marked as "archive" is kept in the system database and PFC permanently. A document non-archived marked document is stored in the system database only. In one embodiment, documents are marked as "archive" by default. Where a non-archived marked document is sent, only the most recent version of such document is kept in the PFC. Furthermore, non-archived documents may be edited, such as, a health benefits request form.

[0080] The PFC **720** includes a at least one drawer **722**$_i$ having at least one folders **724**$_n$. Each drawer **722** is labeled and organized with similar documents. For example, the PFC **720** may have drawers **722** labeled "Health Benefits", "Retirement Benefits", "Other Insurance Benefits", "Other HR Notices", and the like. The folders **724** represent a subcategory for documents in each drawer **722**. As such, the participant is presented with an organized history of all relevant communications that were sent to such participant.

[0081] While the participant web sites **708** provide static HTML web pages for delivering and tracking the processing of a communication, the administrator web pages **706** provide a dynamic interface for managing the plans, benefits, and communications associated with each plan or benefit in the system **100**. As such, a human resource or third-party administrator is able to manage the parameters associated with each plan event related to document delivery and produce pre-defined or ad hoc reports based on these events.

[0082] **FIG. 9** depicts a block diagram of a hierarchy for an administrative structure of the hierarchical plan structure of **FIG. 7**. In particular, the administrator web page **706** are located in the second tier of **FIG. 7**, and are secured with administrator login procedures, password protection, and the like. The second tier administrative web pages **706** are illustratively linked to two third tier web pages **902** containing information from which an administrator may select. The third tier web pages **902** include an administrator tools web page **904** and an administrator reports web page **906**. Any message sent by a service provider to the employer (such as a third party administrator) will be delivered through the forced delivery system as had by the participant; any documents viewed or unviewed by the plan administrator is similarly logged at the service provider's level.

[0083] The administrator tools web page **904** contains links to fourth tier web pages (not shown). These fourth tier web pages in the hierarchical structure include plan tools, which allow an administrator to add a new plan or modify existing plan information; communications tools, which allow an administrator to upload plan communications; and participant tools, which allow an administrator to add a participant or modify an existing participants status to an existing plan. This is done through a "wizard" type of inquiry (all pre-configured with the help of logic provided by Employee Benefits Consultants).

[0084] The administrator reports web page **906** also provides links to fourth tier web pages. The additional fourth tier web pages (not shown) provide an administrator with the capability of preparing and viewing, via the web pages, plan reports, communication reports, user defined reports and participant reports.

[0085] The system of the present invention rids employee benefit sponsors of most of the manual delivery, recordation, and physical storage of paper that currently burdens them. Thus, the delivery and recordkeeping costs relating to paper transactions are dramatically reduced, as are the overall cost of maintaining those plans. Plan sponsors employing the system will yield immediate visible bottom line savings. Plan sponsors also benefit from higher HR personnel productivity, as those personnel are able to focus instead on the core competencies of their business, policy issues, and more "big picture" business tasks. Higher productivity comes from the ability of the plan sponsor to instantly query any employee, employer, or plan service provider activity by plan type, participant, date, communication, viewed/unviewed status, and the like. The invention permits the mining of all data to produce instant and real-time reporting and monitoring capabilities.

[0086] Unlike the current regime of paper-intensive plan administration, HR personnel utilizing the system are relieved from spending any time in determining which employee needs which notice and when. Moreover, the sponsor is able to electronically document that a notice was sent consistent with federal and/or state mandate, with confirmed receipt. For plan administrators with participants lacking access to a computer, the system is accessible from "kiosks" at centrally located workstations. A kiosk, in a sense, is an automated teller machine ("ATM") for employee benefit information, where, instead of viewing savings account and checking balances, the user sees for example, the balance in his retirement plan. Likewise, instead of moving money from a certificate of deposit ("CD") to a checking account, the user moves eligible floating holidays from his vacation bank to his sick leave bank.

[0087] Finally, the system can identify which participant failed to access a computer or kiosk to receive and read a required notice, and then provide notice to the plan administrator indicating who must receive plan documents through other than automated means. Similarly, the system can identify if a plan administrator failed to access the system to receive and read a required notice sent by a service provider.

[0088] Although various embodiments that incorporate the teachings of the present invention have been shown and described in detail herein, those skilled in the art can readily devise many other varied embodiments that still incorporate these teachings.

What is claimed is:

1. A method for automatically identifying, distributing, recording, and re-creating communications electronically to selective participants of a plan, comprising:

providing a database containing plan and plan participant information;

defining a plurality of plan rules associated with plan and plan participant information;

defining a plurality of event triggers based on the plurality of plan rules;

determining if an event trigger initiates delivery of at least one plan communication medium;

determining a plan participant recipient listing;

providing access to view the at least one plan communication medium; and

confirming the selective participants have viewed the at least one plan communication medium.

2. The method of claim 1 wherein the defining a plurality of plan rules is performed by a plan sponsor.

3. The method of claim 1, wherein the defining a plurality of event triggers is defined by a programmer selected from the group comprising a plan sponsor and a plan administrator.

4. The method of claim 1 wherein the plan communications medium is selected from the group comprising a plan document, a plan form, a plan report, and a notification.

5. The method of claim 4 wherein the at least one plan communications medium is generated from the database.

6. The method of claim 1 wherein the determining the plan participant recipient listing comprises the step of initiating a message transmission module in an instance where the event trigger has occurred.

7. The method of claim 6 wherein the initiating step comprises the steps of:

identifying the at least one plan communications medium that is to be delivered; and

identifying at least one recipient of the at least one plan communications medium.

8. The method of claim 7 further comprising the step of electronically delivering the at least one plan communications medium automatically to the at least one recipient.

9. The method of claim 8 further comprising the step of manually delivering the at least one plan communications medium to the at least one recipient.

10. The method of claim 9 wherein the manual delivery step further comprises the steps of:

setting a predetermined period of time for the participants to read the at least one plan communications medium delivered electronically;

determining whether the at least one electronically delivered communications has been read by each participant;

initiating an event trigger in an instance where the at least one electronically delivered communications has not been read; and

notifying a plan administrator.

11. The method of claim 1 wherein the confirmation step further comprises the steps of:

enabling selected web site pages for viewing;

providing an electronic signature affirmation; and

receiving such electronic signature affirmation.

12. The method of claim 1 wherein the confirmation step further comprises the step of prohibiting the participants from viewing a plan web site in an instance where any of the at least one plan communication medium, which are deemed relevant, are not confirmed as being read by the participants.

13. The method of claim 12 wherein the prohibiting step further comprises the steps of:

requesting the plan participant to login to a plan web site;

presenting a communications viewer to the participant; and

enabling the plan participant to select and retrieve the at least one plan communications medium.

14. The method of claim 12 further comprising the step of permitting the plan participant access to the plan web site upon confirming that all of the relevant at least one plan communications medium have been read by the plan participant.

15. The method of claim 1 wherein the defining of the plurality of event triggers further comprises, storing in a trigger event database for each trigger event, an entry identification a trigger description, an associated plan communications medium, a trigger criteria, and trigger type.

16. A computer-readable medium having instructions or programs which, when executed by a process cause the process to perform a method for automatically distributing communications electronically to participants of a plan, comprising:

providing a database containing plan and plan participant information;

defining a plurality of plan rules associated with the plan and plan participant information;

defining a plurality of event triggers based on the plurality of plan rules;

determining if an event trigger initiates delivery of at least one plan communication medium;

determining a plan participant recipient listing;

providing access to view the at least one plan communication medium; and

confirming the selective participants have viewed the at least one plan communication medium.

17. The computer readable medium of claim 16, wherein the defining a plurality of event triggers is defined by a programmer selected from the group comprising a plan sponsor and a plan administrator.

18. The computer readable medium of claim 16 wherein the plan communications medium is selected from the group comprising a plan document, a plan form, a plan report, and a notification.

19. The computer readable medium of claim 18 wherein the at least one plan communications medium is generated from the database.

20. The computer readable medium of claim 16 wherein the determining the plan participant recipient listing comprises the step of initiating a message transmission module in an instance where the event trigger has occurred.

21. The computer readable medium of claim 20 wherein the initiating step comprises the steps of:

identifying the at least one plan communications medium that is to be delivered; and

identifying at least one recipient of the at least one plan communications medium.

22. The computer readable medium of claim 21 further comprising the step of electronically delivering the at least one plan communications medium automatically to the at least one recipient.

23. The computer readable medium of claim **22** further comprising the step of manually delivering the at least one plan communications medium to the at least one recipient.

24. The computer readable medium of claim **23** wherein the manual delivery step further comprises the steps of:

setting a predetermined period of time for the participants to read the at least one plan communications medium delivered electronically;

determining whether the at least one electronically delivered communications has been read by each participant;

initiating an event trigger in an instance where the at least one electronically delivered communications has not been read; and

notifying a plan administrator.

25. The method of claim 16 wherein the confirmation step further comprises the steps of:

enabling selected web site pages for viewing;

providing an electronic signature affirmation; and

receiving such electronic signature affirmation.

26. The computer readable medium of claim 16 wherein the confirmation step further comprises the step of prohibiting the participants from viewing a plan web site in an instance where any of the at least one plan communication medium, which are deemed relevant, are not confirmed as being read by the participants.

27. The computer readable medium of claim 26 wherein the prohibiting step further comprises the steps of:

requesting the plan participant to login to a plan web site;

presenting a communications viewer to the participant; and

enabling the plan participant to select and retrieve the at least one plan communications medium.

28. The computer readable medium of claim 26 further comprising the step of permitting the plan participant access to the plan web site upon confirming that all of the relevant at least one plan communications medium have been read by the plan participant.

29. The computer readable medium of claim 16 wherein the defining of the plurality of event triggers further comprises, storing in a trigger event database for each trigger event, an entry identification, a trigger description, an associated plan communications medium, trigger criteria, and a trigger type.

30. An apparatus, for automatically distributing, recording, monitoring, and re-creating communications electronically to participants of a plan, comprising:

a server providing a plan database,

a plurality of event triggers associated with the plan database;

a plurality of plan communications medium associated with the plan database and the plurality of event triggers;

a transmission module coupled to the plan database;

a plurality of plan participant computers and

a communications network coupled to the server and plurality of plan participant computers, wherein at least one of the plurality of plan communications medium are provided electronically to at least one of the plurality of plan participant computers in an instance where at least one of the plurality of event triggers is initiated.

31. The apparatus of claim 30 wherein the communications medium (**208**) is selected from the group comprising plan documents, plan forms, plan reports, and plan notifications.

32. The apparatus of claim 30 wherein the at least one communication medium is generated from the database.

33. The apparatus of claim 30 wherein the communications network is selected from the group comprising the Internet, Intranet, local area network, and wide area network.

34. The apparatus of claim 30 wherein the plurality of event triggers further comprises, for each trigger event, an entry identification, a trigger description, an associated plan communications medium, a trigger type, and a trigger criteria.

35. The apparatus of claim 34 further comprising a plan web site.

36. The apparatus of claim 35 wherein the plan web site comprises a plurality of web pages having a hierarchical structure.

37. The apparatus of claim 36 wherein the web site provides connectivity to an administrator hierarchy of web pages, a participant hierarchy of web pages, and a communications viewer.

38. The apparatus of claim 37 wherein the communications viewer provides plan participant access to read the delivered at least one plan communications medium.

39. The apparatus of claim 38 wherein the communications viewer further comprises a personal file cabinet.

40. The apparatus of claim 39 wherein the personal file cabinet permanently stores archived communication medium unique to each of the participants and, further, unique to an employer.

41. A method for automatically distributing plan communications electronically to participants of a plan comprising:

sending an electronic mail communication inviting access to a web site;

waiting for access to the web site for a predefined period of time; and

sending an alternate communication after the predefined period of time has surpassed.

42. The method of claim 41 wherein the waiting step further comprises the step of receiving a confirmation from the participants of the plan having viewed the communications.

43. The method of claim 42 wherein the receiving the confirmation step further comprises receiving an electronic signature.

44. The method of claim 41 further comprising the step of permitting the participants having confirmed viewing the plan communications to access additional plan web pages.

45. The method of claim 41 wherein prior to said sending an alternate communication, the method further comprises:

sending a second electronic mail communication; and

waiting for access to the web site for a second predefined period of time.

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(54) **COMPUTER-BASED METHOD FOR AUTOMATIC REMOTE CODING OF DEBTOR CREDIT DATABASES WITH BANKRUPTCY FILING INFORMATION**

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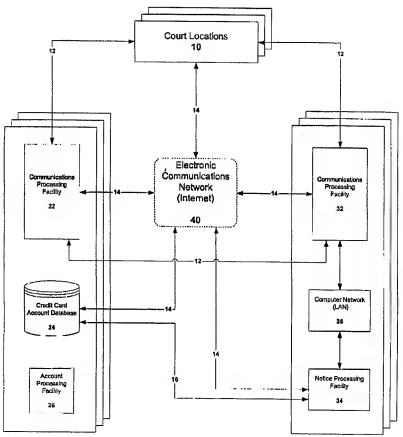
(57) **ABSTRACT**

Disclosed is a computer-implemented method for automatic remote coding of a debtor credit card account database with bankruptcy filing information comprising, at a local data processing location, the steps of collecting bankruptcy filing reports from courts located within the various jurisdictions for which the method provides coverage, extracting unique debtor identifying data from the bankruptcy filing reports, and generating a database query designed to identify database records which match the unique debtor identifying data; the step of establishing an electronic connection between the local data processing location and a remote credit database storage location, the electronic connection being suitable for two-way transmission of data between the local data processing location and the remote credit database storage location; the step of executing, from the local data processing location, the database query against a debtor credit database housed at the remote credit database storage location and identifying debtor records matching the database query; and the step of coding the matching records at the debtor credit database with bankruptcy filing information.



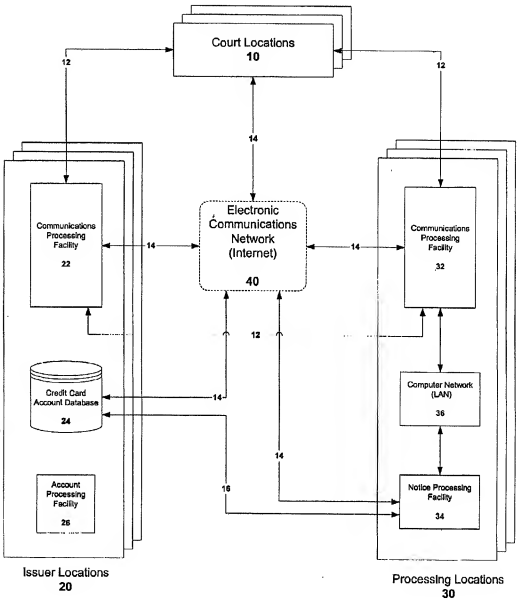

Court Locations
10
12
12
14
Electronic
Communications
Network
(Internet)
40
Communications
Processing
Facility
22
14
14
Communications
Processing
Facility
32
12
Credit Card
Account Database
24
14
Computer Network
(LAN)
36
14
Account
Processing
Facility
26
16
Notice Processing
Facility
34
Issuer Locations
20
Processing Locations
30

FIG. 1

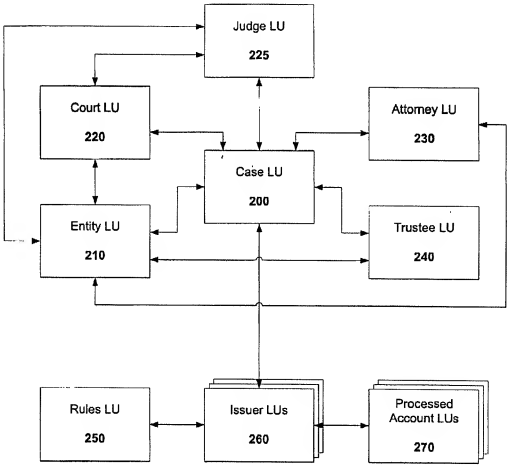

Judge LU
225
Court LU
220
Attorney LU
230
Case LU
200
Entity LU
210
Trustee LU
240
Rules LU
250
Issuer LUs
260
Processed Account LUs
270

FIG. 2

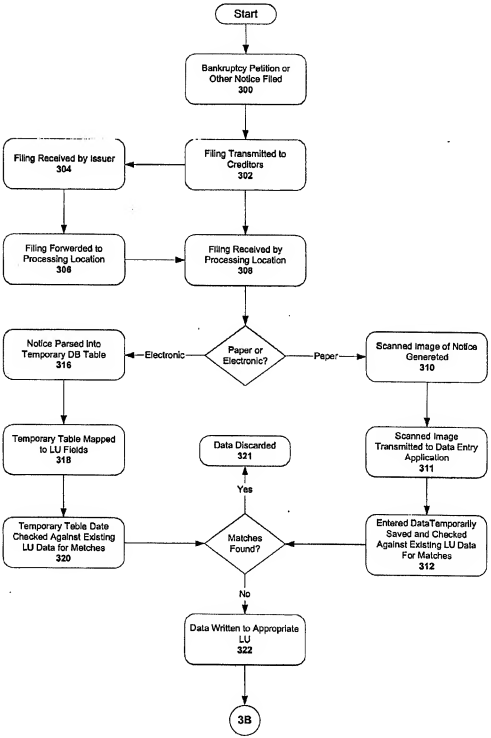

Start
Bankruptcy Petition or Other Notice Filed 300
Filing Transmitted to Creditors 302
Filing Received by Issuer 304
Filing Received by Processing Location 308
Filing Forwarded to Processing Location 306
Paper or Electronic?
Electronic
Paper
Notice Parsed Into Temporary DB Table 315
Scanned Image of Notice Generated 310
Temporary Table Mapped to LU Fields 318
Scanned Image Transmitted to Data Entry Application 311
Data Discarded 321
Yes
Temporary Table Data Checked Against Existing LU Data for Matches 320
Matches Found?
Entered Data Temporarily Saved and Checked Against Existing LU Data For Matches 312
No
Data Written to Appropriate LU 322
3B

FIG. 3A

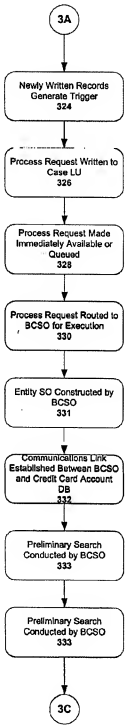

3A
Newly Written Records Generate Trigger 324
Process Request Written to Case LU 326
Process Request Made Immediately Available or Queued 328
Process Request Routed to BCSO for Execution 330
Entity SC Constructed by BCSO 331
Communications Link Established Between BCSO and Credit Card Account DB 332
Preliminary Search Conducted by BCSO 333
Preliminary Search Conducted by BCSO 333
3C

FIG. 3B

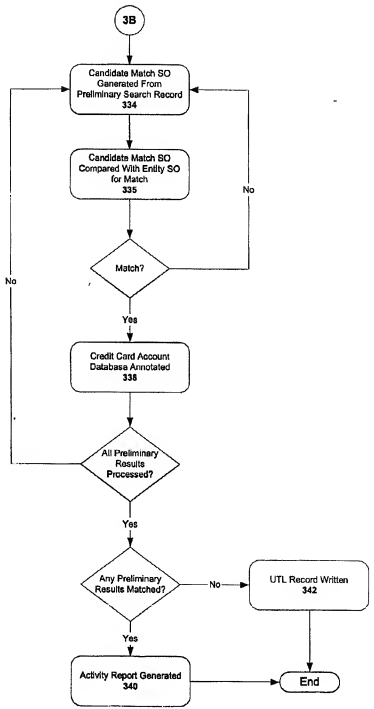

3B
Candidate Match SO Generated From Preliminary Search Record 334
Candidate Match SO Compared With Entity SO for Match 335
Match?
No
No
Yes
Credit Card Account Database Annotated 338
All Preliminary Results Processed?
Yes
Any Preliminary Results Matched?
No
UTL Record Written 342
Yes
Activity Report Generated 340
End

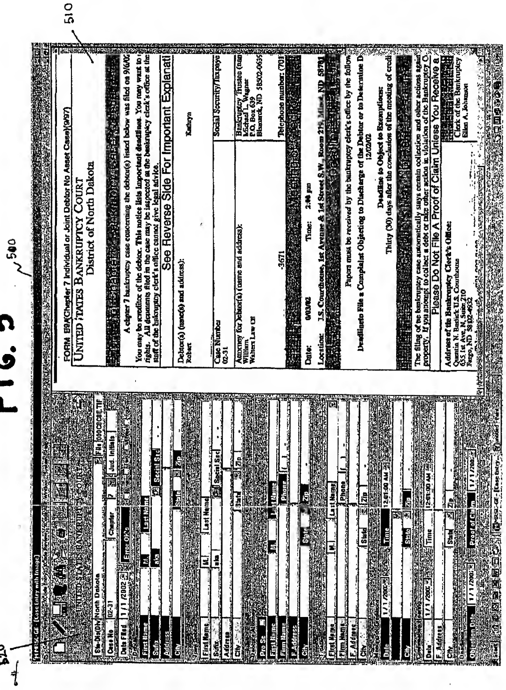
FIG. 3C

FORM B9A (Chapter 7 Individual or Joint Debtor No Asset Case (6/97))

UNITED STATES BANKRUPTCY COURT _____ District of _____	
Notice of Chapter 7 Bankruptcy Case, Meeting of Creditors, & Deadlines	
[A chapter 7 bankruptcy case concerning the debtor(s) listed below was filed on _____ (date).] *or* [A bankruptcy case concerning the debtor(s) listed below was originally filed under chapter _____ on _____ (date) and was converted to a case under chapter 7 on _____.] You may be a creditor of the debtor. This notice lists important deadlines. You may want to consult an attorney to protect your rights. All documents filed in the case may be inspected at the bankruptcy clerk's office at the address listed below. NOTE: The staff of the bankruptcy clerk's office cannot give legal advice.	
See Reverse Side For Important Explanations.	
Debtor(s) (name(s) and address):	Case Number: Social Security/Taxpayer ID Nos.:
Attorney for Debtor(s) (name and address): Telephone number:	Bankruptcy Trustee (name and address): Telephone number:
Meeting of Creditors:	
Date: / / Time: ( ) A.M. ( ) P.M.	Location:
Deadlines:	
Papers must be *received* by the bankruptcy clerk's office by the following deadlines:	
Deadline to File a Complaint Objecting to Discharge of the Debtor *or* to Determine Dischargeability of Certain Debts: **Deadline to Object to Exemptions:** Thirty (30) days after the *conclusion* of the meeting of creditors.	
Creditors May Not Take Certain Actions	
The filing of the bankruptcy case automatically stays certain collection and other actions against the debtor and the debtor's property. If you attempt to collect a debt or take other action in violation of the Bankruptcy Code, you may be penalized.	
Please Do Not File A Proof of Claim Unless You Receive a Notice To Do So.	
Address of the Bankruptcy Clerk's Office: Telephone number:	For the Court: Clerk of the Bankruptcy Court:
Hours Open:	Date:

FIG. 4

Fig. 5



PROCESSED ACCOUNTS REPORT
FOR CREDIT CARD ISSUER X

Accounts Located in the SE Region

From: 01/01/2002 12:00:00 AM
To: 01/01/2002 11:59:59 PM

Debtor's Name Co-Debtor's Name	Days Between Located &		Debtors SSN Co-Debtor's SSN		Debtor's Address			State District	Division	Case Number	
Account Number	Rcvd	Filed	Account Balance	Located Region	Date filed	Chapter	Date Rcvd	Time Rcvd	Date Located	Time Located	Action
SMITH DEPARTMENT STORES											
Smith, John			123-45-6789		123 Main Roaad Miami, FL 33131			FL	Florida	123-45678	
001-0002-00034	0.085	7.25	$73.37	SE	12/1/01	7	12/8/01	12:30:00AM	12/8/01	2:30:00AM	Coded
Public, John Q Public, Jane R			123-45-6700 123-45-6701		123 Oak St Miami, FL 33142			FL	Florida	01-234-34	
002-0012-01032	0.095	6.25	$573.37	SE	12/5/01	11	12/12/01	1:30:00AM	12/12/01	2:45:00AM	Coded
341-1234-79861	0.090	6.25	$954.25	SE	12/5/01	11	12/12/01	1:30:00AM	12/12/01	2:45:00AM	Coded
SOUTHEAST OIL CO											
Smith, John			123-45-6789		123 Main Roaad Miami, FL 33131			FL	Florida	123-45678	
001-0002-00034	0.085	7.25	$73.37	SE	12/1/01	7	12/8/01	12:30:00AM	12/8/01	2:30:00AM	Coded
Smith, John			123-45-6789		123 Main Roaad Miami, FL 33131			FL	Florida	123-45678	
001-0002-00034	0.085	7.25	$73.37	SE	12/1/01	7	12/8/01	12:30:00AM	12/8/01	2:30:00AM	Coded
Smith, John			123-45-6789		123 Main Roaad Miami, FL 33131			FL	Florida	123-45678	
001-0002-00034	0.085	7.25	$73.37	SE	12/1/01	7	12/8/01	12:30:00AM	12/8/01	2:30:00AM	Coded

FIG. 6

D.

COMPUTER-BASED METHOD FOR AUTOMATIC REMOTE CODING OF DEBTOR CREDIT DATABASES WITH BANKRUPTCY FILING INFORMATION

FIELD OF INVENTION

[0001] The present invention relates generally to methods for remotely searching for, locating and updating selected records from a remotely located database and the present invention specifically relates to a method of remotely coding records in debtor credit card account databases with information regarding bankruptcy filings.

BACKGROUND OF THE INVENTION

[0002] The consumer credit card industry has enjoyed explosive growth in the past decade. The tremendous growth in the industry has required credit card providers, and third-party administrators of those accounts, to computerize their account processing and handling activities as much as possible. One aspect of processing and handling of credit card accounts which is particularly automated is billing, and, particularly as it relates to the present invention, collection activities directed at holders of delinquent accounts.

[0003] In order to maintain proper controls over the status of consumer accounts, credit card issuers (hereinafter "Issuers") have developed specialized computer applications which analyze critical information concerning credit card accounts and initiate particular collection-related activities when certain thresholds have been met. For instance, an initial "past due" letter may be sent to the holder of a credit card (hereinafter "Holder") once payment has not been received for a certain number of days after the payment due date. More stringent measures, such as the referral of an account to the Issuer's collections department, a collection agency, or to an outside attorney, may follow if the number of days the account is past due exceeds a second or subsequent threshold.

[0004] The success rate of an Issuer's automated collection efforts depends on the accuracy and completeness of the financial data it maintains for each of the accounts it services. For this reason, Issuers place tremendous reliance on large and sophisticated account databases which are updated millions of times each day to ensure their accuracy and completeness.

[0005] The account databases maintained by Issuers contain information about each credit card account and Holder which is critical for the correct processing of payments and for the commencement, tracking, and termination of collections activities. For example, the credit card account databases contain basic contact information about each account, the balance due for each account, and the date or dates when payments are supposed to be made by the credit card holder. Another piece of information which is usually maintained by an Issuer in its database of accounts is the bankruptcy status of the account's Holder. The electronic manipulation of this bankruptcy status information is the central focus of the present invention.

[0006] Issuers place great emphasis on the maintenance of accurate information about the bankruptcy status of Holders because federal laws in the United States require them to not commence collections activities against any Holder who files for bankruptcy relief. The same laws require any activity related to the collection of a debt to be immediately suspended or "stayed" by the Issuer once it receives notice that the Holder has filed for bankruptcy. The penalties to which the Issuer is subject for failing to cease collection activities once it receives formal notice of a bankruptcy filing, or for commencing collections-related activity against a bankruptcy filer, can be severe.

[0007] In addition, in order to preserve certain rights to collect, at least partially, monies due to it by a bankrupt Holder, an Issuer must, shortly after learning about the bankruptcy filing, or upon notice received, assert the debt to the appropriate bankruptcy court by filing a "proof of claim". Failure to file a timely proof of claim may cause the Issuer to forfeit any claim it may have to bankruptcy proceeds despite the existence of a valid debt and funds available to satisfy same. Other remedies which are also time-sensitive may be available to the Issuer as well.

[0008] The problem faced by Issuers, particularly the larger entities, is that they have accounts which number in the hundreds of millions. As a consequence, they are named as creditors in hundreds of thousands of bankruptcy filings every day. Issuers are typically notified of the bankruptcy filing by one of their Holders, through a paper form issued by the court where the Holder files for bankruptcy. An electronic notice may also be received under certain circumstances. The paper forms allow the Issuer, upon receipt, to: (a) extract the relevant information from the form; (b) locate accounts held by the Holder named in the form from among the millions of accounts serviced by the Issuer; (c) verify that the located Holder account or accounts are the correct ones; and (d) annotate the database with the bankruptcy information. This, in turn, ensures that activity on annotated accounts may be commenced or halted as necessary to be compliant with federal bankruptcy and banking laws. Because the paper forms are not always uniform from court to court, Issuer currently must perform these functions manually, which task carries with it a tremendous cost in manpower and resources and with reduced accuracy.

[0009] A review of prior efforts reveals that a computer-based method for automatic remote coding of debtor credit databases with bankruptcy filing information has never been realized. Previous attempts at automated methods relating to the coding of financial databases are described in U.S. Pat. No. 4,914,587 to Clouse, (the '587 patent); U.S. Pat. No. 5,274,547 to Zoffel, (the '547 patent); U.S. Pat. No. 6,098,052 to Kosiba et al., (the '052 patent); U.S. Pat. No. 5,323,315 to Highbloom, (the '315 patent), U.S. Pat. No. 5,615,408 to Johnson et al. (the '408 patent); U.S. Pat. No. 6,119,103 to Basch et al., (the '103 patent); and U.S. Pat. No. 5,426,281 to Abecassis, (the '281 patent), each of which is incorporated here by reference.

[0010] The '587 patent describes a financial data processing system utilizing two levels of distributed processors interconnected to one another and a central processor interconnected to the first level of distributed processors. The financial data being processed includes loan information representing the balance of each loan outstanding, the interest rate payable on each loan, the principal and interest due and payable for each periodic loan payment, the identity of each debtor, the delinquency, if any, on each loan, the collection histories of respective loans and financial infor-

mation relating to leases and leased property. In one embodiment, the system provides for the high speed entry of data utilizing optical character readers which are utilized to scan customer statements containing pre-printed financial data in a format and type recognizable by the optical character reader.

[0011] The '547 patent describes a system and method for automatically generating credit reports. The system includes a central data processing facility which is connectable to national credit repositories through dedicated data links. The central data processor requests credit information on an applicant from one or more of the repositories, generates a credit report, and transmits the report to the requesting user (i.e., customer). Requests and reports are transmitted via a communications system or network. If data is inputted from more than one repository, the central data processing facility eliminates duplicated data, selects the best data if there are conflicts, and merges the remaining data into a single report.

[0012] The '052 patent describes a computerized collection strategy model for use in collecting payments from delinquent accounts. The computerized collection strategy model estimates for each possible collection strategy, how much will be paid on each account in response to that collection strategy, estimates the amount of resources to be expended in the execution of that collection strategy, and recommends a particular collection strategy for each account that optimizes the use of the available collection resources.

[0013] The '315 patent describes a system for monitoring the status of individual items of personal property which serve as collateral for securing financing. The system receives financing information from a first financing source and a second financing source. A unique identification code is associated with each individual item of personal property which serves as collateral for securing financing from the first and second financing sources. The financing information from the first financing source is compared with the financing information from the second financing source based at least in part upon the identification codes of the items of personal property to identify particular items of personal property that simultaneously serve as collateral to secure financing from both the first and second financing sources. The affected first and second financing sources are notified about the identified item of personal property.

[0014] The '408 patent describes an apparatus for credit based management of a telecommunication system. One embodiment of the apparatus includes an interface for communicating credit information on a particular subscriber and for receiving call records for the particular subscriber that are derived from a switch which establishes connections between telecommunication devices. A credit limit device then utilizes the credit information to establish a credit limit for the subscriber. The apparatus also includes a device for comparing the particular subscriber's call usage to a credit limit established for the subscriber based on information obtained from the credit bureau. An output device is used to provide an indication that the subscriber has exceeded their credit limit. Another embodiment of the apparatus, includes a device for, upon expiration of a predetermined time period, contacting the credit bureau to obtain a new credit score for a subscriber and use this score to update the subscriber's credit limit.

[0015] The '103 patent describes a computer-implemented method for predicting financial risk, which includes receiving first transaction data pertaining to transactions performed on a first financial account. The first financial account represents a financial account issued to a given account holder by a first account issuer. The method further includes receiving second transaction data pertaining to transaction performed on a second financial account different from the first financial account. The second financial account represents a financial account issued to the given account holder by a second account issuer different from the first account issuer. There is further included scoring the first transaction data and the second transaction data based on a preexisting model to form a score for the account holder. Additionally, there is included transmitting, if the score is below a predefined financial risk threshold, the score to one of the first account issuer and the second account issuer.

[0016] The '281 patent describes a transaction protection system that permits non-related third parties to offer an impartial, readily accessible standardized service that will protect and encompass any moneys that are tendered by an individual or business entity to a transaction in relation to a second business or entity. Delivery of payment will occur upon a future condition being met automatically whereby the system both performs an escrowing function, a payment function and a notifying function automatically. The transaction processing system acts as a temporary depository control in the flow of the moneys from parties in a transaction ensuring that sufficient balances are available for the transaction and assuring that payment is made only upon satisfaction of the conditions set by the parties to the transaction. The system is implemented by means of either an integrated credit/debit system, deposit slips and forms or through conventional checks combined with either credit card or deposit slips. The system may be implemented using site dependent or site independent (portable) point of sales terminals, computers or touch tone telephones. The system further implements electronic accessing means for allowing either of the parties to the transaction to affect the processing of the transaction.

[0017] None of the inventions described in the prior art include a computer-based method for coding of databases which automatically extracts bankruptcy filing information received in a variety of formats and seamlessly interacts with a remote credit card account database to update individual account records therein with said bankruptcy information to help ensure adequate compliance with applicable debt collection laws.

[0018] Accordingly, there is a need in the prior art for a computer-based method for coding of debtor credit card account databases with bankruptcy filing information which significantly automates the process of extracting data from paper-based or electronic notices regarding the filing of new bankruptcies or changes in the status of existing bankruptcies.

[0019] There is a further need in the prior art for a computer-based method for coding of debtor credit databases with bankruptcy filing information which facilitates and automates the coding of remote credit databases through the use of a widespread computer network.

[0020] There is a further need in the prior art for a computer-based method for coding of debtor credit databases with bankruptcy filing information which can interact remotely, with minimal adaptation, with different types of

credit databases regardless of the database vendor, the computer language used to program and access the database, the database configuration, or the access rules governing the database.

[0021] There is yet a further need in the prior art for a computer-based method for coding of debtor credit databases with bankruptcy filing information which can automatically generate comprehensive reports detailing all changes made to said databases.

SUMMARY OF THE INVENTION

[0022] The present invention overcomes significant deficiencies in the prior art by providing a computer-implemented method for automatic remote coding of a debtor credit card account database with bankruptcy filing information comprising, at a local data processing location, the steps of collecting bankruptcy filing reports from courts located within the various jurisdictions for which the method provides coverage, extracting unique debtor identifying data from the bankruptcy filing reports, and generating a database query designed to identify database records which match the unique debtor identifying data; the step of establishing an electronic connection between the local data processing location and a remote credit database storage location, the electronic connection being suitable for two-way transmission of data between the local data processing location and the remote credit database storage location; the step of executing, from the local data processing location, the database query against a debtor credit database housed at the remote credit database storage location and identifying debtor records matching the database query; and the step of coding the matching records at the debtor credit database with bankruptcy filing information.

[0023] Accordingly, it is an object of the present invention to provide a computer-based method for coding of debtor credit databases with bankruptcy filing information which significantly automates the process of extracting data from paper-based or electronic notices regarding the filing of new bankruptcies or changes in the status of existing bankruptcies.

[0024] It is an additional object of the present invention to provide a computer-based method for coding of debtor credit databases with bankruptcy filing information which facilitates and automates the coding of remote credit databases through the use of a widespread computer network.

[0025] It is an additional object of the present invention to provide a computer-based method for coding of debtor credit databases with bankruptcy filing information which can interact remotely, with minimal adaptation, with different types of credit databases regardless of the database vendor, the computer language used to program and access the database, the database configuration, or the access rules governing the database.

[0026] It is an additional object of the present invention to provide a computer-based method for coding of debtor credit databases with bankruptcy filing information which can automatically generate comprehensive reports detailing all changes made to said databases.

[0027] These and other objects, features, and advantages of the present invention may be more clearly understood and appreciated from a review of ensuing detailed description of the preferred and alternate embodiments and by reference to the accompanying drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0028] **FIG. 1** is a schematic block diagram which shows the interrelationship between different hardware and software components of the system.

[0029] **FIG. 2** is a schematic representation of the database structure used in the preferred embodiment of the present invention.

[0030] FIGS. 3A-3C are a flowchart illustrating the basic steps in the operation of the present invention.

[0031] **FIG. 4** is an illustration of a sample blank Notice of Chapter 7 Bankruptcy Case of the type processed by the preferred embodiment of present invention.

[0032] **FIG. 5** is an illustration of the user interface for the custom data-entry application used in the preferred embodiment of the present invention.

[0033] **FIG. 6** is an illustration of a sample activity report generated using the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0034] Referring initially to **FIG. 1** of the drawings, in which like numerals indicate like elements throughout the several figures, the environment in a preferred embodiment of the present invention includes at least one Court Location **10**, at least one Issuer Location **20** and at least one Processing Location **30**. It is envisioned at present that each of the three aforementioned locations will be housed in a separate physical building, however, a separate geographic presence for each location is not necessary for the present invention to function. The Court Locations **10** can transmit paper-based communications to the Issuer Locations **20** and the Processing Locations **30** by means of traditional methods such as mail, messenger service, facsimile, telegraph, and the like **12**. The Court Locations **10** can transmit electronic-based communications to the Issuer Locations **20** and the Processing Locations **30** by means of an electronic link **14** which is in turn connected to an electronic communications network, such as the Internet **40**.

[0035] Each Issuer Location **20** is equipped with a communications processing facility **22** which is responsible for receiving communications from the Court Locations **10** and transmitting communications to the Processing Locations **30**. The Issuer Location communications processing facility **22** can receive communications from the Court Locations **10** via traditional methods such as mail, messenger service, facsimile, telegraph, and the like **12** or via an electronic link **14** connection to an electronic communications network, such as the Internet **40**. Similarly, The Issuer Location communications processing facility **22** can transmit communications to the Processing Location communications processing facility **32** via traditional methods such as mail, messenger service, facsimile, telegraph, and the like **12** or via an electronic link **14** connection to an electronic communications network, such as the Internet **40**.

[0036] Also housed at the Issuer Location **20** is at least one credit card account database **24** which contains account

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information, including bankruptcy status information, about credit cards issued by the Issuer. The credit card account database **24** is accessible by electronic means to computers external and internal to the Issuer. An example of a computer having access to the credit card account database **24** is an account processing facility **26** which can be, but need not be, physically housed at the Issuer Location. The account processing facility **26** could, for example, obtain information from the credit card account database for billing purposes or in order to initiate or terminate collection-related activities.

[0037] Each Processing Location **30** is equipped with a communications processing facility **32** which is responsible for receiving communications from the Court Locations **10** and from the Issuer Locations **20**. The Processor Location communications processing facility **32** can receive communications from the Court Locations **10** and the Issuer Locations **20** via traditional methods such as mail, messenger service, facsimile, telegraph, and the like **12** or via an electronic link **14** connection to an electronic communications network, such as the Internet **40**. Similarly, the Processing Location communications processing facility **32** can transmit communications to the Issuer Locations **20** via traditional methods such as mail, messenger service, facsimile, telegraph, and the like **12** or via an electronic link **14** connection to an electronic communications network, such as the Internet **40**.

[0038] Also housed at the Processing Location **30** is at least one notice processing facility **34** where bankruptcy-related notices received by the Processing Location are processed in order to ultimately generate updates to the credit card account database **24**. The notice processing facility **34** is linked electronically to the Processing Location's communications processing facility **32** through a traditional internal network infrastructure such as a Local Area Network ("LAN") **36**. Alternatively, if the notice processing facility **34** is at a location different than the communications processing facility **32**, communication between the two locations may be established through a Wide Area Network ("WAN") or through the Internet **40**.

[0039] Finally, the notice processing facility **34** is also linked electronically **16** to the credit card account database **24** by means of a WAN, LAN, through the Internet or by any other standard network connection.

[0040] At the heart of the preferred embodiment of the present invention lies an integrated set of database applications residing inside computers located at the notice processing facility **34**. These applications receive new bankruptcy-related notices, processes them, remotely link with and update the credit card account databases **24** and generate reports detailing these activities. The general database structure for these applications is described in **FIG. 2**.

[0041] In the preferred embodiment, the database structure is composed of several database constructs which are referred to hereinafter as Logical Units ("LUs"). In abstract terms, an LU is a logical representation of a database or a subset of a database. In the present instance, an LU is a collection of tables and similar database constructs which are related by means of rules defining relationships between the constructs.

[0042] Referring now to **FIG. 2**, the central database LU is called a Case LU **200**. The Case LU **200** contains information about each individual bankruptcy-related notice processed by the system. The information contained in the Case LU **200** includes case-specific data such as the court case number, the filing date, the Issuer or issuers affected by the Notice, the type of bankruptcy and the type or types of notices received. The Case LU **200** is linked, or "related", to several other LUs which contain additional information applicable to the cases stored in the Case LU **200**. Additional LUs which are related to the Case LU **200** include: the Entity LU **210**, the Court LU **220**, the Judge LU **225**, the Attorney LU **230**, the Trustee LU **240**, the Issuer LU **260**, and the Processed Account LU **270**.

[0043] The Entity LU **210** contains data about all individuals, corporations or other legal entities who are Holders of an Issuer's credit card and are identified as debtors in bankruptcy filings where the Issuer is identified as a creditor. The Entity LU **210** contains information such as names, addresses, social security numbers, federal tax identification numbers, telephone numbers, and the like, for each entity.

[0044] The Court LU **220** contains data about the different courts from which an Issuer has received information on bankruptcy filings naming the Issuer as a creditor. The Court LU **220** contains information such as the address, names of clerks, telephone numbers, and the like, for each court.

[0045] The Judges LU **225** contains data about the different judges presiding over bankruptcy cases for which an Issuer has received information on bankruptcy filings naming the Issuer as a creditor. The Judges LU **220** contains information such as the address, names, telephone numbers, and the like, for each judge.

[0046] The Attorney LU **230** contains data about the different attorneys named in bankruptcy filings where the Issuer is identified as a creditor. The Attorney LU **230** contains information such as lawyers names, law firm names, addresses, telephone numbers, and the like, for each attorney.

[0047] Each Issuer serviced by the method of the present invention, has a corresponding Issuer LU **260** and Processed Account LU **270**. Each Issuer LU and Processed Account LU **270** contains data about its corresponding Issuer.

[0048] Each Issuer LU **260** contains information such as addresses, telephone numbers, kinds of credit cards, database locations and access information, and the like, for each Issuer. The Issuer LU **260** also contains information about the Issuer's computer system, its structure, "front-end" applications used to access the credit card account database **24** and handling instructions for particular types of bankruptcy-related notices.

[0049] Each Processed Account LU **270** contains data about the different accounts for its corresponding Issuer which have been processed using the method of the present invention. The Processed Account LU **270** contains information such as account numbers, balances, bankruptcy status, types of notices processed, and the like, for each Issuer account processed.

[0050] The Case LU **200**, the Entity LU **210**, the Court LU **220**, the Judge LU **225**, the Attorney LU **230**, the Trustee LU **240**, the Issuer LU **260**, and the Processed Account LU **270** are all related to form a cohesive repository of data containing all of the relevant information extracted from bank-

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ruptcy notices received at the Processing Location **30**. Every record in the Entity LU **210**, the Court LU **220**, the Attorney LU **230**, the Trustee LU **240**, the Issuer LU **260**, and the Processed Account LU **270** is indexed to at least one record in the Case LU **200**. Using this relationship between the different LUs, it is possible to quickly and efficiently generate a data structure element which contains all of the information necessary to update the credit card account database **24** with the information contained in a single bankruptcy-related notice. These data structure elements, akin to records in a "virtual" database table, are hereinafter referred to as Software Objects ("SOs"). SOs do not only contain data but also contain routines that manipulate the data within the SO. Routines contained within an SO can, for example, be used to compare two SOs and determine whether their data matches.

[0051] For example, a Bankruptcy SO is a collection of all of the known data about a particular bankruptcy case and contains information such as: the court case number, the case's filing date, the bankruptcy filer's identifying data, the court identifying data, the attorney identifying data, the judge identifying data, and the trustee identifying data. This information is obtained from all of the aforementioned LUs and assembled into a virtual record. An SO is said to be a "virtual" record because it is not permanently stored in any particular place but rather, it is formed "on-the-fly" as needed to perform a particular operation.

[0052] In addition to a Bankruptcy SO, in the preferred embodiment of the present invention a number of other types of SOs can be created. Possible types of SOs include Entity SOs (including identifying information about an entity that is the subject of a bankruptcy-related notice, i.e. an individual or corporate debtor who lists an Issuer as a creditor); Court SOs, Attorney SOs and Attorney SOs.

[0053] By using the above-described structure of related database LUs, the method of the present invention uses a more streamlined and efficient database than would be otherwise possible. For example, if a particular trustee is assigned to more than one bankruptcy filing (a likely scenario) and a "flat" database structure were used (i.e., one not depending on a series of related LUs), the information for the trustee would be duplicated for every record of a filing to which he is assigned. By using related LUs, the trustee's information can be entered only once and then be associated with multiple case records.

[0054] In addition to the LUs discussed above, which contain data about specific bankruptcy filing, the database structure of the present invention contains an additional type of LU, the Rules LU **250**, which includes information about Comparison Rules (a term which is defined later in this specification) and thresholds necessary to match information contained in bankruptcy-related notices to particular accounts within accounts found in that Issuer's credit card account database **24**. The Rules LU **250** also includes rules regarding the level of accuracy which is necessary to establish that a record in the credit card account database matches information contained in a bankruptcy-related filing.

[0055] In the preferred embodiment of the present invention, each Issuer will be assigned a record in the Rules LU **250** that defines the Matching Rules (a term which is defined later in this specification) and Comparison Rules and thresholds applicable to that Issuer.

[0056] The use of a Rules LU **250**, as opposed to "hard coding" the database manipulation rules into a custom application, permits more flexibility in increasing the number of Issuers whose credit card account databases can be annotated by the instant method. To wit, in order to be able to service a new Issuer's credit card account database, essentially, the only specialized code which needs to be written is a record in the Rules LU defining Matching and Comparison Rules and thresholds for that Issuer, and the creation of an Issuer LU **260** with information applicable to that Issuer.

[0057] FIGS. 3A-3C generally depict the steps utilized in the present invention to update and annotate an Issuer's credit card account database **24** from the time a bankruptcy related notice is filed.

[0058] Beginning with **FIG. 3A**, the process starts with the filing of a bankruptcy petition in bankruptcy court by a debtor who is also a Holder **300**. The court upon commencement of a bankruptcy case issues a Notice of Commencement of Bankruptcy under either Chapter 7, Chapter 11, or Chapter 13 of the U.S. Bankruptcy Code (Title 11, United States Code). A sample blank Notice of Chapter **7** Bankruptcy Case is illustrated in **FIG. 4**. The bankruptcy court then transmits a copy of the notice **302** to every entity named as a creditor in the bankruptcy filing. Filings and notices subsequent to the initial petition are also transmitted to creditors named in the petition, or subsequently. In this case, if the Issuer is named as a creditor, the notice will be sent to the Issuer Location **20**. Once the Issuer receives the notice **304**, the notice is then immediately forwarded **306** to the Processing Location **30** by the Issuer Location's mail processing facility **22**. It is also possible that the Issuer can register a standing request with the court in question that all notices which name the Issuer as a creditor be forwarded directly to the Processing Location **30**.

[0059] The bankruptcy notice is then received **308** by the Processing Location's mail processing facility **32** where it is readied for input into the system. The mail processing facility **32** can receive bankruptcy notices, either from the court or from the Issuer, in traditional paper format or as an electronic data file.

[0060] If the notice is received as an electronic data file, it is formatted in a standardized way known to both the court and the notice processor. One such standard format, and the format used in the preferred embodiment of the present invention, is the Electronic Data Interchange ("EDI") format. In the preferred embodiment, a notice received in electronic format is first parsed into fields in a temporary database table **316** and then individual fields from the temporary table are mapped to their corresponding fields in the applicable LU (i.e., Case, Attorney, Court, and Trustee LUs) **318**. The information in the temporary table is then checked for matches against records in the Bankruptcy, Case, Attorney, Court, Trustee, Issuer and Processed Account LUs **320**. If a record matches, this means that the information is already in the Processing Location's database LUs and is discarded **321**. If a record does not match, it means it is new information and the data is written to the appropriate LU **322**.

[0061] If the notice is received as a paper document, the data it contains must be extracted and fixed in digital format for inputting into the appropriate database LUs. This can be

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accomplished by having a data-entry operator manually key in the data into a database front-end application or by using an automated scanning application which can be programmed to learn the location of relevant data on the notice and use optical character recognition ("OCR") techniques to automate the data entry.

[0062] Because the forms used by bankruptcy courts for transmitting notices are not always uniform, and because the quality of the text in the notices is not always suitable for OCR operations, the preferred embodiment of the present invention utilizes a semi-automated method of data entry for paper forms. The semi-automated method is initiated by processing the paper notice with an optical computer scanner to create a computer-based graphical image of the notice **310**. The graphical image is then transmitted through a computer network to a custom data-entry computer application **311**.

[0063] The custom data-entry application, illustrated in **FIG. 5**, presents a human operator with a split screen on a computer monitor **500**. One side of the screen displays the image of the paper notice to be processed **510** and the other side of the screen displays fields for the entry of specific information to be extracted from the image by the human operator **520**. As the operator keys in information **312** into the data-entry side of the screen **520**, the information is temporarily saved by the data entry application. As with electronically formatted notices, the temporarily saved data is compared for matches against records in the Bankruptcy, Case, Attorney, Court, Trustee, Issuer and Processed Account LUs and only unmatched records are permanently written to the appropriate LUs **322**.

[0064] Continuing with **FIG. 3B**, every time a new records is written into the Case LU **200**, signifying that a new bankruptcy-related notice has been received and entered, a monitoring mechanism of the database application of the present invention generates a "trigger" event **324**. The "trigger", in turn, generates a process request **326** which references the new record written to the Case LU **200**. A process request can be a record which is written to the applicable Issuer LU **260**. The process request can be immediately made available for handling or can be queued if the system is occupied with a previously issued process request **328**. If a process request is queued, the queue may consist of a queued series of similar records inside the Issuer LU **260**.

[0065] The most recently issued process request, or the next process request in the process request queue, is routed to a "Bankruptcy Coding Software Object" ("BCSO") application which in turn executes the process request **330**. The BCSO initially looks up the Entity information for the Case record referenced by the process request. That is, the BCSO looks up the bankruptcy notice record in the Case LU **200** and then determines, from the bankruptcy record, the corresponding record in the Entity LU **210**. BCSO then constructs an Entity SO **331** from data fetched from the Entity LU **210**. This Entity SO will be compared against entities in the subject Issuer's credit card account database **24** for possible matches and if one is found the credit card account database **24** will be updated with information from the bankruptcy notice being processed.

[0066] After generating the Entity SO, the BCSO establishes a communications link with the credit card account database **24** and begins searching for matches **332**. BCSO conducts its search using the database rules contained in the record of the Rules LU **250** applicable to the credit card account database **24**. As a preliminary step **333**, the BCSO attempts to eliminate from contention as many records as possible from the credit card account database **24** since it generally contains a massive amount of records which would otherwise take a long time to completely check out individually. This step is usually carried out by building a result set of records obtained by querying the credit card account database **24** several times. Each query retrieving a subset of records singled out by using a number of criterion including but not limited to Social Security Number, Federal Employment ID Number, Last Name+First Name, and the like.

[0067] Continuing with **FIG. 3C**, at step **334**, the BCSO generates a Match Candidate SO from the first record returned by the preliminary query for comparison with the Entity SO generated from the Entity LU **210** in step **331**. The Match Candidate SO's structure is, in essence, identical to the structure of the Entity SO, but is populated with data extracted from the credit card account database **24** instead of data from the various LUs.

[0068] The Match Candidate SO and the Entity SO are compared **335** and if they do not match, the scripting object then generates **334** a new Match Candidate SO from the next record returned by the preliminary search and again compares the Match Candidate SO to the Entity SO **335**. There may be multiple accounts returned by the preliminary search that contain Match Candidate SOs that truly match the Entity SO. Thus, all Holder information from all account records in the preliminary result set are compared against the Entity SO.

[0069] Whenever a Match Candidate SO and the Entity SO are matched, the BCSO annotates the database record in the credit card account database **24** which corresponds to the Match Candidate SO **338**. The annotation consists of revising, if appropriate, the field in the credit card account database **24** which denotes the bankruptcy status of the Holder of the account and of writing any additional information about the bankruptcy notice which is specified in the Rules LU **250** entry for the database in question. Anytime a record in the credit card account database **24** is annotated, the BCSO also generates an entry in the associated Issuer's Processed Account LU **270**.

[0070] The Processed Account LU **270** is used, as a final step, to generate an activity report of all records annotated using the method of the present invention **340**. A sample activity report is illustrated in **FIG. 6**.

[0071] Finally, if the BCSO fails to generate a single match to the Entity SO from the successively generated Match Candidate SOs, a record written to yet another LU entitled Unable To Locate, or UTL, LU **342**. Reports from the UTL LU are periodically generated for manual verification since they represent bankruptcy notices filed by an entity in which the Issuer is listed as a creditor but for which the Issuer has no record of an account with the entity.

[0072] As can be seen in this specification, at several points in the preferred embodiment of the present invention, data extracted from bankruptcy-related notices is tested for "matches" to data residing in the various LUs. Similarly,

Entity SOs are tested for "matches" to Match Candidate SOs. It is important to point out that the determination of whether a "match" has occurred is of critical importance to the accuracy of the method of the present invention and therefore particular care must be exercised in the design of the logic for various matching mechanisms which can be utilized and which are well known to those skilled in the relevant art.

[0073] The preferred embodiment of the present invention utilizes a two-tier matching logic. Generally speaking, the present method compares two database "records", each containing multiple "fields" of data. The first tier of the matching logic, utilizes a set of rules referred to as "Matching Rules". Matching Rules function at the field-comparison level. Matching Rules define what level of similarity between corresponding fields of the two records being compared is considered to be a match. For example, when comparing an Entity SO with a Match Candidate SO, each of the two SOs may have a field which corresponds to a person's name. The Matching Rules determine how closely the names in each SO must be to each other before the two fields are considered a match.

[0074] Matching Rules may consist of one or more tests applied to the two data fields in question as well as a predetermined minimum threshold of similarity beyond which a match is presumed. As an illustration, one of the data fields may contain the string "John Q. Public" while the second filed may contain the string "John Q Public". If a "character-for-character" test is applied to the two fields, it will reveal that the two fields are not a 100% identical because the first field contains a period after the middle initial while the second doesn't. However, it is obvious to the human eye that the two fields should be considered a match. In order to accomplish this, a similarity threshold may be utilized to, for instance, dictate that a mach of 80% in a "character-for-character" test should be deemed a match.

[0075] In order to increase the accuracy of Matching rules, the preferred embodiment of the present invention generally applies a number of tests, in succession, to the candidate fields in order to determine whether a match exists. In addition to a character-for-character test, the Matching rules could utilize, for example: (a) "character count" tests which account for transposed characters (i.e., "John" vs. "Jhon"); or (b) "slide tests" which account for erroneously repeated characters (i.e. "Smith" v. "Smiith"). Each type of test may have its own threshold and the results of the multiple tests may be combined into an average score to increase the confidence level of the result.

[0076] Matching Rules, in general, are encoded into the scripting objects which perform the data comparisons as system wide norms which apply regardless of the type of record being compared. However, different Matching Rules may be applied to different types of data. For example, alphanumeric, numeric and date type fields may each have their own set of Matching Rules.

[0077] The second tier of the matching logic, utilizes a set of rules referred to as "Comparison Rules". Comparison Rules operate at the record-comparison level. That is, after Matching Rules have been applied to compare all of the fields in the two records being compared, the Comparison Rules determine what level of similarity overall in the fields is sufficient to establish a match between the records.

[0078] For example, the Comparison Rules for a particular Issuer may dictate that in order to deem two records matched, they must have at least one field match exactly and two fields must match partially. For instance, a Comparison Rule may require that in order for an Entity SO to be deemed matched to a Matched Candidate SO, the two SOs must have an exact match in the Social Security Number filed and at least partial matches in the Address and Name fields.

[0079] Comparison Rules are generally determined in conjunction with consultations made with the different Issuers whose credit card databases are revised using the present methods. A particular Issuer may follow a more conservative approach to matching and may wish to only consider matches to occur at higher threshold levels (i.e., in the extreme case, only deem that a match has occurred between records when all fields match exactly). Another Issuer may wish to follow a more relaxed matching standard and only require partial matches to establish a match between two records.

[0080] In order to allow flexibility between Comparison Rules for different Issuers, the preferred embodiment of the present invention stores Comparison Rules inside the Rules LU **250** applicable to each Issuer.

[0081] Accordingly, it will be understood that the preferred embodiment of the present invention has been disclosed by way of example and that other modifications and alterations may occur to those skilled in the art without departing from the scope and spirit of the appended claims.

What is claimed is:

1. A computer-implemented method for automatic remote coding of a debtor credit database with bankruptcy filing information comprising:

a. at a local data processing location, the step of collecting bankruptcy filing reports from courts located within the various jurisdictions for which the method provides coverage;

b. at said local data processing location, the step of extracting unique debtor identifying data from said bankruptcy filing reports;

c. at said local data processing location, the step of generating a database query designed to identify database records which match said unique debtor identifying data;

d. the step of establishing an electronic connection between said local data processing location and a remote credit database storage location, said electronic connection being suitable for two-way transmission of data between said local data processing location and said remote credit database storage location;

e. the step of executing, from said local data processing location, said database query against a debtor credit database housed at said remote credit database storage location and identifying debtor records matching said database query; and

f. the step of, coding said matching records at said debtor credit database with bankruptcy filing information.

* * * * *

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10/729,517	12/05/2003	Brian D. Oxman	FID-010	2393

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EXAMINER	
COLAN, GIOVANNA B	
ART UNIT	PAPER NUMBER
2162	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

E.

Office Action Summary	Application No.	Applicant(s)	
	10/729,517	OXMAN ET AL.	
	Examiner	Art Unit	
	Giovanna Colan	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) *4 and 25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5--24, 26-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is issued in response to the Amendment filed on 10/10/2006.

2. Claims 1 – 3, 5, 9 – 11, 13 – 24, and 26 were amended. Claims 4, and 25 were canceled. Claims 27 – 31 were added.

3. This action is made Final.

4. Claims 1 – 3, 5 – 24, 26 – 31 are pending in this application.

5. Applicant's arguments with respect to amended claims 1 – 3, 5, 9 – 11, 13 – 24, and 26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 1 – 3, 5 – 24, 26, and 28 – 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broadbent et al. (Broadbent hereinafter) (US Patent App. Pub. 2001/0047326 A1, published: November 29, 2001), in view of Fay et al. (Fay hereinafter) (US Patent App. Pub. 2002/0188540 A1, filed: June 8, 2001), and further in view Esposito (US Patent App. Pub. No. 2001/0051906 A1, filed May 1, 2001).

Regarding Claim 1, Broadbent discloses a computerized system for producing a domestic relations order comprising:

a receiver for receiving information (Figure 4A, item 401, Page 9, [0123], lines 3 – 8, Broadbent[1]). However, Broadbent does not expressly disclose a domestic relations order. On the other hand, Fay discloses a receiver for receiving information relating to a domestic relations order (Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Fay's teachings to the system of Broadbent. Skilled artisan would have been motivated to do so, as suggested by Fay (Page 2, [0012] and [0014], lines 1 – 3 and 3 – 5; respectively, Fay), to provide a user with a plurality of periodic retirement income payments; and to provide a defined retirement benefit which will guarantee an individual a minimum defined income level

upon individual's retirement. In addition, both of the references (Broadbent and Fay) teach features that are directed to analogous art and they are directed to the same field of endeavor of database management system, such as, authorization, results creation based on received information, and rules module. This relation between both of the references highly suggests an expectation of success.

The combination of Broadbent in view of Fay furthermore discloses that:

said information comprising an alternate payee (Figure 22, "Married to (which co-borrower)", Broadbent).

However, the combination of Broadbent in view of Fay is silent with respect to court information. On the other hand, Esposito discloses a system similar to the combination of Broadbent in view of Fay's including: court information (Page 1, [0008], lines 5 – 7 and 21 – 29; Esposito).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Esposito's teachings to the system the combination of Broadbent in view of Fay. Skilled artisan would have been motivated to do so, as suggested by Esposito (Page 1, [0008], lines 14 – 19 and 23 – 25, Esposito), to offer a simplified compliance with federal and state rules (through an artificial intelligence that can identify a particular event that has occurred with respect to a particular employee benefit plan, and a particular employee who must receive a particular document and in what manner and when); and to avoid potential penalties assessed by a federal court or government agency for non-compliance. In addition, the

[1] Wherein examiner interprets information, such as, input borrower, property and originator date as the

applied references (Broadbent, Fay, and Esposito) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, compliance rules for documents, and employee benefit plans. This close relation between the applied references highly suggests an expectation of success.

Furthermore, the combination of Broadbent in view of Fay and futher in view of Esposito discloses:

a rules engine in communication with the receiver for selecting sample text passages (Page 9, [0120], lines 10 – 17, Broadbent; and Page 6, [0068], lines 14 – 25, Esposito); and

a document assembler for automatically incorporating a first subset of the sample text passage (Page 9, [0120], lines 10 – 17, Broadbent; and Page 6, [0068], lines 14 – 25, Esposito) and a second subset of the received information comprising the alternate payee (Figure 22, "Married to (which co-borrower)", Broadbent) and the court information into a court-compliant domestic relations order for submission to a court (Figure 18, "loan programs that fit the criteria you entered on the previous pages", Page 10, [0125], lines 5 – 9, Broadbent[2]; Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay; and Page 1, [0008], lines 8 – 13, Esposito).

Regarding Claim 2, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein a subset of the received information

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[2] information relating to a domestic relation order claimed.

comprises information associated with a participant in an employee benefit plan (Page 7, [0096], lines 7 – 9, employment agreement, Broadbent; and Page 1, [0008], lines 8 – 13, Esposito).

Regarding Claim 3, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein, received information comprises information associated with a legal representative of the participant (Figure 30, "Welcome, Joe Realtor", Page 7, [0097], lines 1 – 7, Broadbent).

Regarding Claim 5, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein, the received information comprises information associated with a legal representative of the alternate payee (Figure 22 and 30, Page 7, [0097], lines 1 – 7, Broadbent).

Regarding Claim 6, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system further including a data storage device for storing rules relating to a domestic relations order (Page 4 and 16, [0051] and [0202], lines 1 – 6 and 1 – 3; respectively, Broadbent; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay).

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[2] Wherein the step of displaying specific loan programs (as in Figure 18, Broadbent) corresponds to the step of selecting a subset of the sample text passages claimed.

Regarding Claim 7, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein the data storage device further stores sample text passages (Figure 5 and 22, item 543 and "save" in Figure 22, Page 20, [0219], lines 17 – 22; respectively, Broadbent).

Regarding Claim 8, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein the sample text passages relate to a domestic relations order (Figure 5 and 22, item 543 and "save" in Figure 22, Page 20, [0219], lines 17 – 22; respectively, Broadbent; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay).

Regarding Claim 9, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein the rules engine further selects a first subset of the sample text passages based, at least in part, on the stored rules (Page 9, [0120], lines 10 – 17, Broadbent; and Page 6, [0068], lines 14 – 25, Esposito).

Regarding Claim 10, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein the rules engine further selects a first subset of the sample text passages based, at least in part, on the received information

(Figure 18, "loan programs that fit the criteria you entered on the previous pages", Page 10, [0125], lines 5 – 9, Broadbent[3]; and Page 6, [0068], lines 14 – 25, Esposito).

Regarding Claim 11, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein the document assembler receives additional information from the data storage device, the additional information having been previously included in a domestic relations order (Page 13, [0177], lines 8 – 13, the previous 'override' application, Broadbent; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay).

Regarding Claim 12, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system further comprising an administrative module for maintaining the rules engine (Page 4, [0051], lines 1 – 4, Broadbent).

Regarding Claim 13, the combination of Broadbent in view of Fay and further in view of Esposito discloses a computerized method for producing a domestic relations order, comprising:

providing a plurality of sample text passages relating to domestic relations orders (Figure 23, "1234 any Street", Broadbent[4]; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay), the sample text passages including embedded

[3] Wherein the step of displaying specific loan programs (as in Figure 18, Broadbent) corresponds to the step of selecting a subset of the sample text passages claimed.

parameters (Figure 23, Current Street Address, Broadbent[5]) comprising an alternate payee Figure 22, "Married to (which co-borrower)", Broadbent) and court information (Page 1, [0008], lines 5 – 7 and 21 – 29; Esposito);

requesting information for inclusion into a domestic relations order (Figure 24, Broadbent; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay), the requested information including values for one or more of the embedded parameters (Figure 24, item showing value " $15000", Page 21, [0238], lines 1 – 3, Broadbent[6]);

receiving the requested information (Figure 4A, item 401, Page 9, [0123], lines 3 – 8, Broadbent[7]); and

automatically assembling court-compliant domestic relations order (Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay) for submission to a court using a first subset of the sample text passages (Page 9, [0120], lines 10 – 17, Broadbent; and Page 6, [0068], lines 14 – 25, Esposito) and a second subset of the requested information (Figure 4D, items 482 and 483, Page 10, [0125] and [0126], lines 14 – 17 and 18 – 21; respectively, Broadbent[8]; and Page 1, [0008], lines 8 – 13, Esposito).

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[4] Wherein "1234 any Street" corresponds to the sample text passage claimed. In addition, the text that would be entered in the text box (Figure 29, Broadbent) corresponds to another sample text passage claimed.
[5] Wherein "Current Street Address" corresponds to the embedded parameter claimed.
[6] Wherein the value "$1500" corresponds to the value claimed; and "Estimated Property Value" corresponds to the parameter claimed.
[7] Wherein examiner interprets information, such as, input borrower, property and originator date as the information relating to a domestic relation order claimed.

Regarding Claim 14, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising receiving the requested information over an electronic communications network (Figure 1, item 100, typical internet network configuration, Page 8, [0116], lines 1 – 7, Broadbent).

Regarding Claim 15, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method wherein the electronic communications network is one of a local area network, a wide area network, a telephone network, an intranet, or the Internet, or any other combination thereof (Figure 1, item 100, typical internet network configuration, Page 8, [0116], lines 1 – 7, Broadbent).

Regarding Claim 16, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising receiving the requested information through an online questionnaire (Figure, 15, Page 5, [0061], lines 5 – 10, Broadbent).

Regarding Claim 17, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising receiving at least a subset of the requested information from a previously completed domestic relations order (Page 13, [0177], lines 8 – 13, the previous 'override' application, Broadbent; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay).

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[8] Wherein the file, specifically, the worker compensation and loan completion report correspond to the

Regarding Claim 18, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising receiving at least a subset of the requested information associated with a participant in an employee benefit plan (Page 7, [0096], lines 7 – 9, employment agreement, Broadbent; and Page 1, [0008], lines 8 – 13, Esposito).

Regarding Claim 19, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method wherein the employee benefit plan comprises a defined contribution plan and a defined benefit plan, or both (Page 7, [0096], lines 7 – 9, employment agreement, Broadbent; and Page 1, [0008], lines 8 – 13, Esposito).

Regarding Claim 20, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising receiving a subset of the requested information associated with a legal representative of a participant in an employee benefit plan (Figure 30, "Welcome, Joe Realtor", Page 7, [0097], lines 1 – 7, Broadbent).

Regarding Claim 21, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising receiving a subset of the

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assembled domestic relations order claimed.

requested information from an alternate payee of an employee benefit plan (Figure 22, "Married to (which co-borrower)", Broadbent).

Regarding Claim 22, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising receiving at least a subset of the requested information associated with a legal representative of the alternate payee of an employee benefit plan (Figure 22 and 30, Page 7, [0097], lines 1 – 7, Broadbent).

Regarding Claim 23, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising providing a set of rules relating to the generating a domestic relations order (Page 4 and 16, [0051] and [0202], lines 1 – 6 and 1 – 3; respectively, Broadbent; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay).

Regarding Claim 24, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method wherein automatically assembly the court-compliant domestic order comprises determining the subset of the sample text passages based, at least in part, on the rules (Page 9, [0120], lines 10 – 17, Broadbent; Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay; and Page 1, [0008], lines 8 – 13, Esposito).

Regarding Claim 26, the combination of Broadbent in view of Fay and further in view of Esposito discloses a computerized system for producing a domestic relations order, comprising:

means for storing sample text passages for inclusion into a domestic relations order, the sample text passages including embedded parameters (Figure 5 and 22, item 543 and "save" in Figure 22, Page 20, [0219], lines 17 – 22; respectively, Broadbent[9]; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay) comprising an alternate payee Figure 22, "Married to (which co-borrower)", Broadbent) and court information (Page 1, [0008], lines 5 – 7 and 21 – 29; Esposito);

means for receiving information about a first domestic relations order (Figure 24, Broadbent; and Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay), the information providing values for one or more of the embedded parameters (Figure 24, item showing value " $15000", Page 21, [0238], lines 1 – 3, Broadbent[10]); and

means for automatically assembling court-compliant domestic relations order (Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay) for submission to a court using a first subset of the sample text passages (Page 9, [0120], lines 10 – 17, Broadbent; and Page 6, [0068], lines 14 – 25, Esposito) and a second subset of the received information (Figure 4D, items 482 and 483, Page 10, [0125] and

[9] Wherein "First Name", "Last Name", etc correspond to the embedded parameters claimed.
[10] Wherein the value "$1500" corresponds to the value claimed; and "Estimated Property Value" corresponds to the parameter claimed.

[0126], lines 14 – 17 and 18 – 21; respectively, Broadbent[11]; and Page 1, [0008], lines 8 – 13, Esposito).

Regarding Claim 28, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method further comprising determining one or more questions for the online questionnaire based on a rules engine and a subset of the requested information (Page 5, [0061], lines 5 – 10, Broadbent).

Regarding Claim 29, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method wherein assembling comprises using a document template (Page 7, [0073, lines 12 – 20, Esposito).

Regarding Claim 30, the combination of Broadbent in view of Fay and further in view of Esposito discloses a method wherein automatically assembling the court-compliant domestic relations order comprises using a subset of the requested information as input for one or more parameter fields of the document template (Page 9, [0120], lines 10 – 17, Broadbent; Page 2 and 8, [0015] and [0077], lines 1 – 6 and 1 – 8; respectively, Fay; and Page 6, [0068], lines 14 – 25, Esposito).

Regarding Claim 31, the combination of Broadbent in view of Fay and further in view of Esposito discloses a system wherein the court-compliant domestic relations

[11] Wherein the file, specifically, the worker compensation and loan completion report correspond to the

order is assembled according to one or more predefined document formats (Page 26, [0280], lines 14 – 26, Broadbent; and Page 3, [0037], lines 1 – 8, Esposito).

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broadbent et al. (Broadbent hereinafter) (US Patent App. Pub. 2001/0047326 A1, published: November 29, 2001), in view of Fay et al. (Fay hereinafter) (US Patent App. Pub. 2002/0188540 A1, filed: June 8, 2001), in view Esposito (US Patent App. Pub. No. 2001/0051906 A1, filed May 1, 2001), and further in view of Cohen et al. (Cohen hereinafter) (US Patent App. Pub. No. 2004/0064404 A1, filed: October 1, 2002).

Regarding Claim 27, the combination of Broadbent in view of Fay and further in view of Esposito discloses all the limitations as discussed above including court information. However, the combination of Broadbent in view of Fay and further in view of Esposito is silent with respect to a case number. On the other hand, Cohen discloses court information and a case number (Page 4, [0042], lines 1 – 8, Cohen).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Cohen's teachings to the system of the combination of Broadbent in view of Fay and further in view of Esposito. Skilled artisan would have been motivated to do so, as suggested by Cohen (Page 4, [0042], lines 4 –

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assembled domestic relations order claimed.

8, Cohen), to provide specific data about a case. In addition, the applied references (Broadbent, Fay, Esposito, and Cohen) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, court information. This close relation between the applied references highly suggests an expectation of success.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Prior Art Made Of Record

1. Broadbent et al. (US Patent App. Pub. 2001/0047326 A1, published: November 29, 2001) discloses an interface system for mortgage loan originator compliance engine.

2. Hueler (US Patent App. Pub. No. 2003/0004844, filed: April 25, 2001) discloses an independent annuity placement system and method.

3. Fay et al. (US 2002/0188540 A1) discloses a method and system for portable retirement investment.

4. Stiff et al. (US 2002/0194098 A1) discloses a system and method for guaranteeing minimum periodic retirement income payments using an adjustment account.

5. Florance et al. (US 2003/0078897 A1) discloses a system and method for collection, distribution, and use of information in connection with commercial real state.

6. Esposito (US Patent App. Pub. No. 2001/0051906 A1, filed May 1, 2001).

7. Cohen et al. (US Patent App. Pub. No. 2004/0064404 A1, filed: October 1, 2002).

Points Of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan
Examiner
Art Unit 2162
December 13, 2006

John E. Breene

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E.

Notice of References Cited	Application/Control No. 10/729,517	Applicant(s)/Patent Under Reexamination OXMAN ET AL.	
	Examiner Giovanna Colan	Art Unit 2162	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2001/0047326 a1	11-2001	Broadbent et al.	705/38
*	B	US-2003/0004844	01-2003	Hueler, Kelli	705/35
*	C	US-2002/0188540 a1	12-2002	Fay et al.	705/36
*	D	US-2002/0194098 a1	12-2002	Stiff et al.	705/36
*	E	US-2003/0078897 a1	04-2003	Florance et al.	705/80
*	F	US-2001/0051906 a1	12-2001	Esposito, Jewell Llm	705/35
*	G	US-2004/0064404 a1	04-2004	Cohen et al.	705/038
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	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

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	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.